Newington-Dover EIS
NH 16 / US 4 / Spaulding Turnpike
NHS-027-1(37), 11238

WELCOME

Public Informational Meeting

Dover City Hall - June 30, 2004

Newington Town Hall – July 1, 2004

Meeting Agenda

- Introduction (5 minutes)
- Project Purpose and Need (5 minutes)
- Project Process and Schedule (5 minutes)
  - Q & A (5 minutes)
- Project Background (15 minutes)
  - Q & A (5 minutes)
- Alternatives Conceptualized (40 minutes)
  - Q & A (10 minutes)
- Preliminary Constraints/Impacts Matrix (10 minutes)
  - Q & A (5 minutes)
- Alternatives Recommended for Further Study (15 minutes)
- Open Discussion

Project Purpose

- Reduce Safety Problems
- Improve Transportation Efficiency

Project Need

- Spaulding Turnpike
  - Major Limited Access Highway
  - Links Seacoast Region w/ I-95, Concord, Lakes Region, and White Mountains
  - National Highway System (NHS)
  - Principal Arterial
  - Major Commuter Route
  - Major Freight Corridor
  - Major Tourist Route

Project Need (con't)

- Spaulding Turnpike
  - Traffic Volumes
    - 30,000 (1980)
    - 70,650 (2003)
    - Projected 101,800 (2025)
  - Level of Service F
  - Geometric Deficiencies
    - Limited Sight Distance & Substandard Shoulders (Little Bay Bridges)
    - Substandard Merge, Diverge, and Weave Areas
  - Accident Data – Long Delays

Project Need (con't)

- Spaulding Turnpike
  - Bisects Residential/Recreational/Commercial Areas
  - Local Connectivity – motorists, pedestrians, bicyclists

Project Need (con't)

- Spaulding Turnpike
  - Seismic Performance Category B
  - Little Bay Bridges – major structures

Project Need (con't)

- Spaulding Turnpike
  - State Ten-Year Transportation Improvement Program
  - Top Long-Term Transportation Priority (Seacoast MPO)
  - Development & Traffic Growth ↑
  - Traffic Operations & Safety ↓
    - Resulting Increased Delays, Increased Accidents, Potential Loss of Commerce

Project Phases

- Preliminary Design & Environmental Evaluation
- Environment Impact Statement (EIS) Framework
- 5 Phases of EIS Process
  - Phase 1 - Project Scoping / Data Collection / Issue Identification
  - Phase 2 – Conceptual Alternatives Development & Screening
  - Phase 3 – Preliminary Design / Impact Assesssment / Draft EIS
  - Phase 4 – Public Hearing
  - Phase 5 – Final EIS

PROJECT SCHEDULE

- Phase 1: March 2004
- Phase 2: August 2004
- Phase 3: August 2004 - July 2005
- Phase 4: October 2005 Public Hearing
- Phase 5: March 2006 - December 2006
- FHWA Record of Decision: November 2006
- Final Design: November 2006 – October 2011
- Construction: June 2008 - October 2013

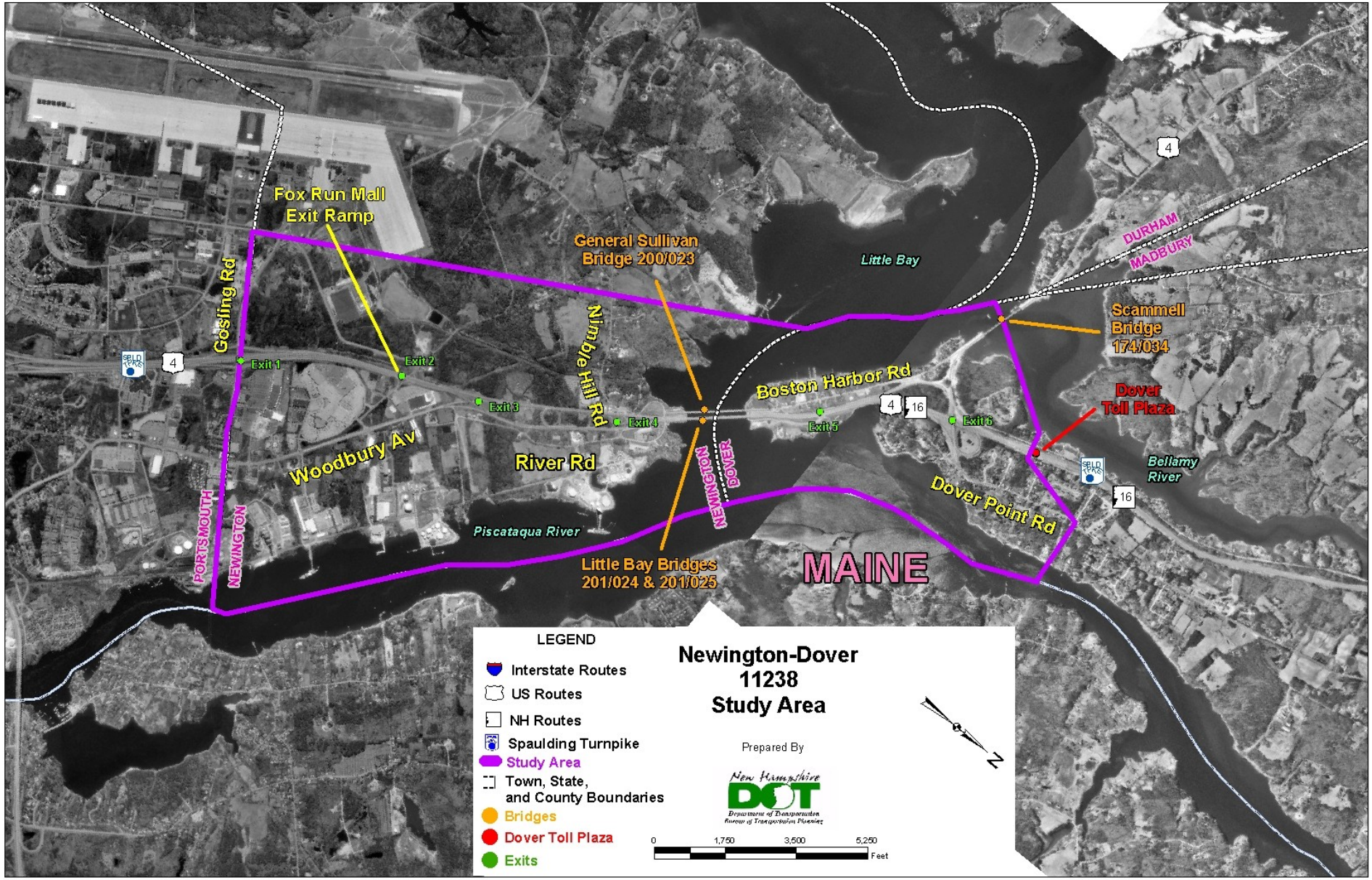
Public Participation

- Advisory Task Force
- Public Informational Meetings
- Resource Agency Meetings
- www.newington-dover.com
- Public Hearing

Project Background

- Study Area Map
- Existing Conditions
- Existing Corridor Deficiencies
- Preliminary Bridge Investigations

Project Study Area



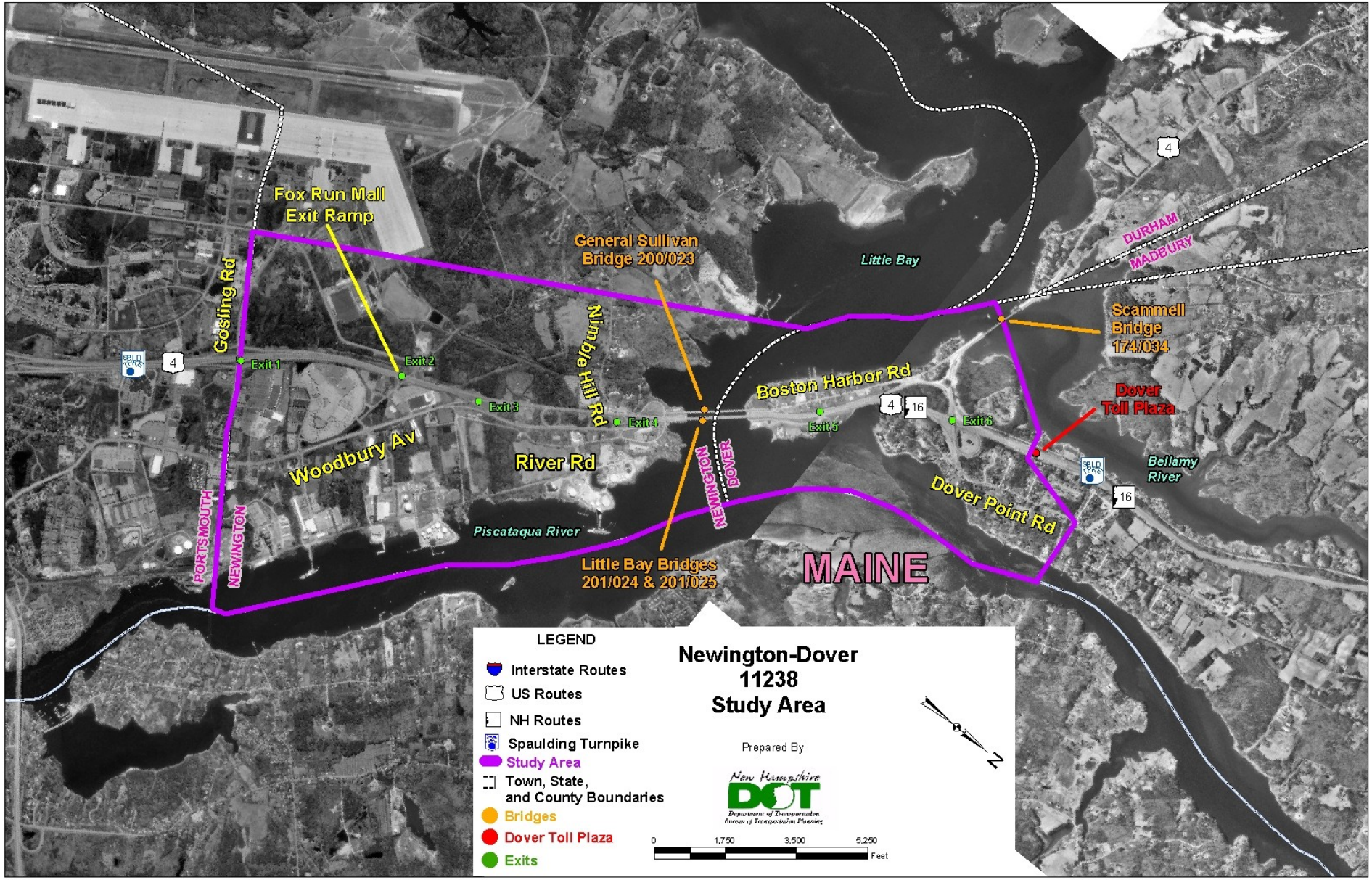
Exit 2 – Exit 3

Exit 4N

Exit 4, Nimble Hill Road

Hilton Park

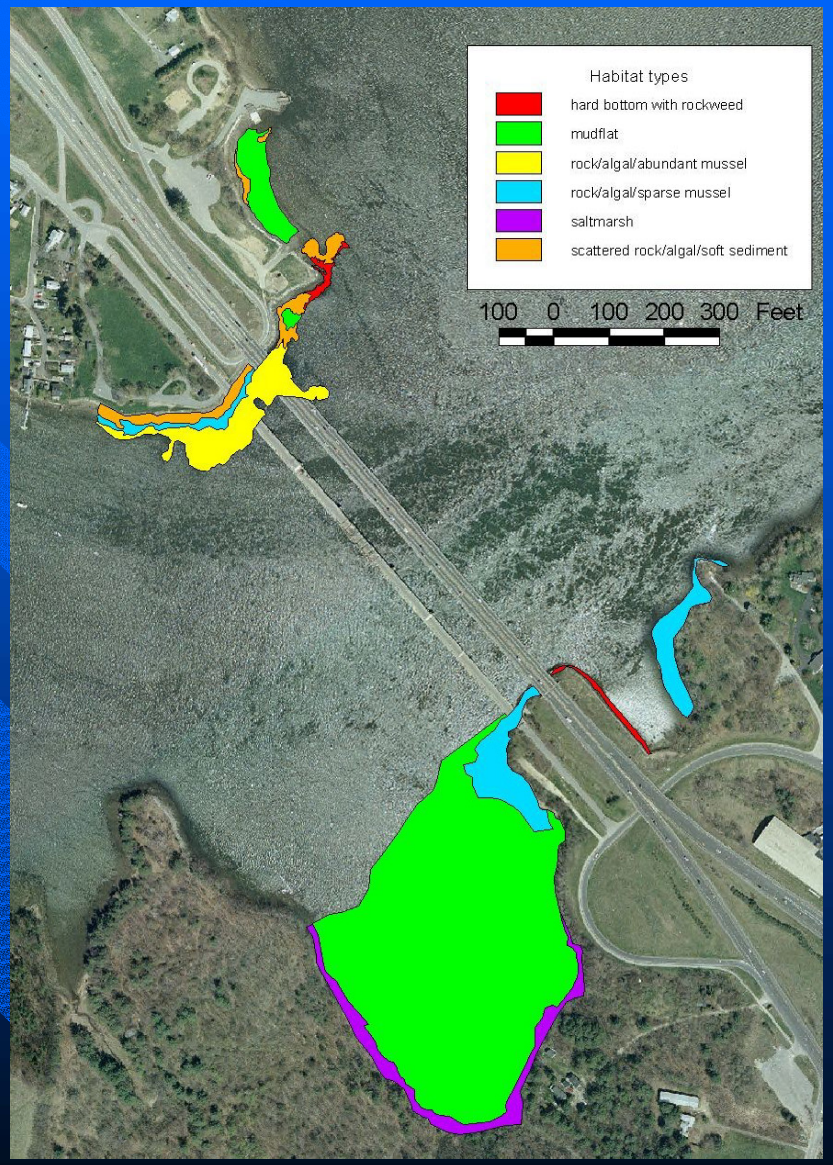
Project Study Area



Sensitive Environmental Resources

Great Bay Estuary & Associated Natural Resources

- Marine Habitat
- Coastal & Freshwater Wetlands
- Wildlife Habitat
- Threatened & Endangered Species
- Water Quality
- Floodplains



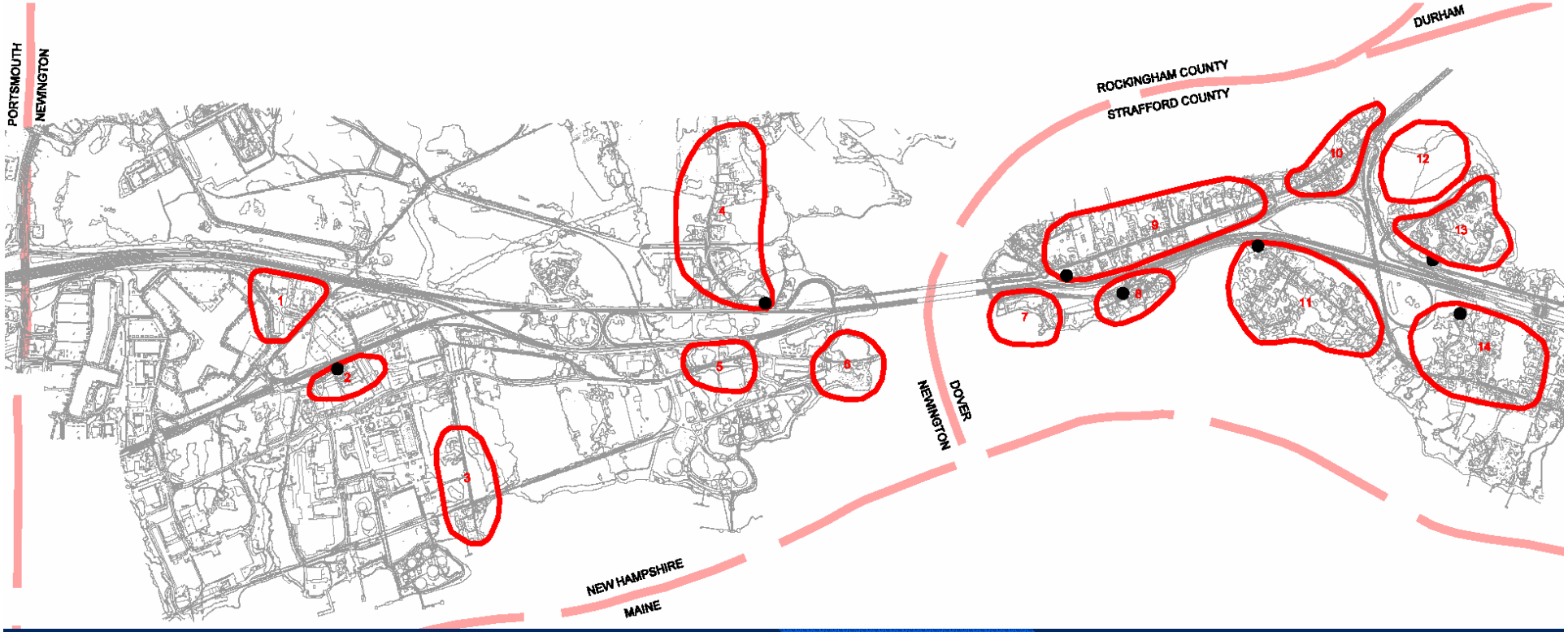
Air Quality

- Strafford & Rockingham County in “serious” non-attainment for ozone
- Analyze carbon monoxide & ozone precursors (VOCs & NOx)
- Microscale modeling at critical locations (e.g. interchanges & intersections)
- Review results against State Implementation Plan

Noise

- Identified 14 noise sensitive areas
- Monitor existing noise and traffic levels (completed in October)
- Calibrate existing conditions model (TNM 2.0)
- Predict future traffic and noise levels
- Identify mitigation measures per FHWA guidelines

Sensitive Receptor Locations

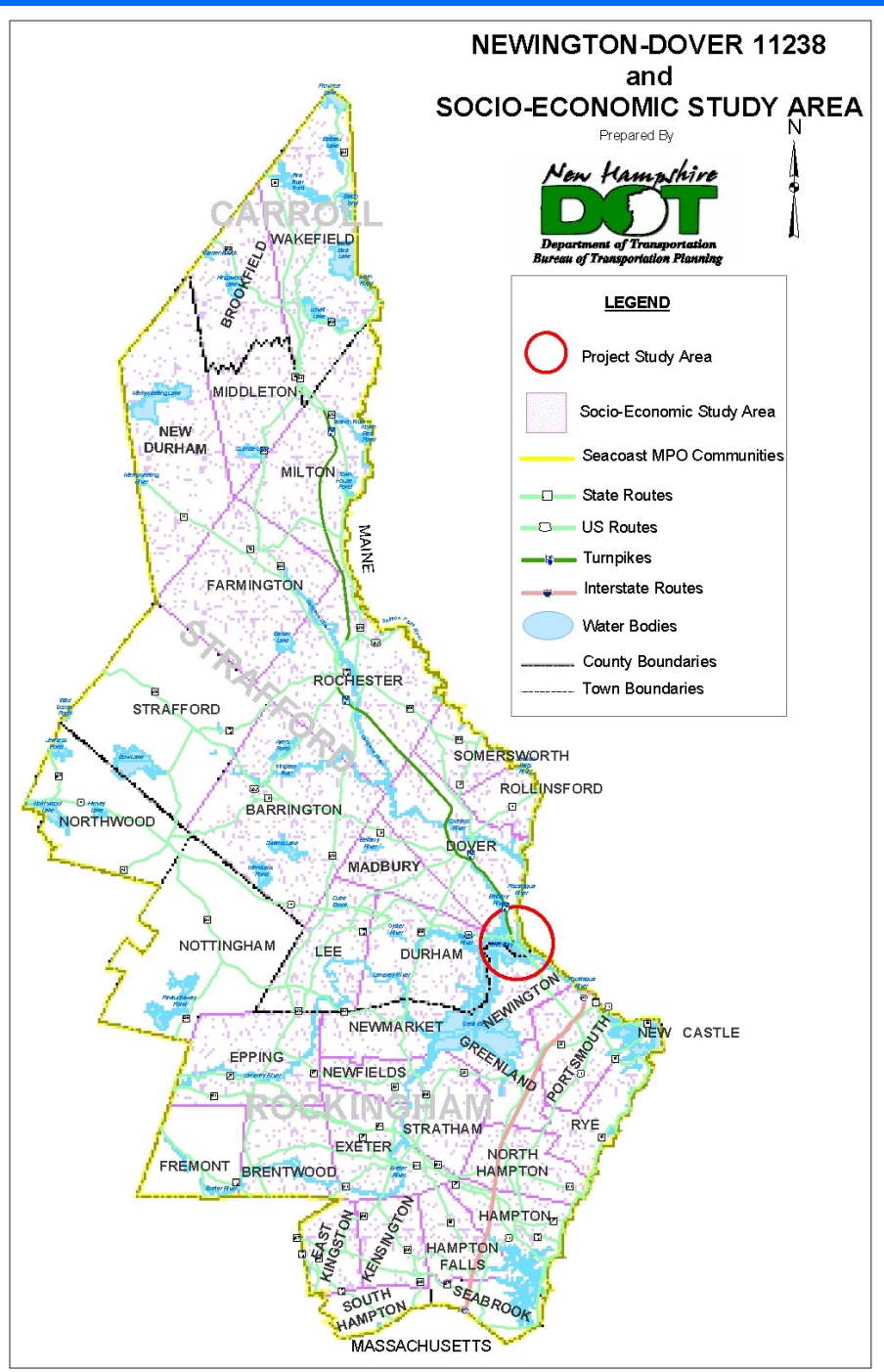


Socio-economic

- Direct:

  e.g., Property takings

- Indirect & Cumulative: e.g., Changes in growth patterns (REMI Model)



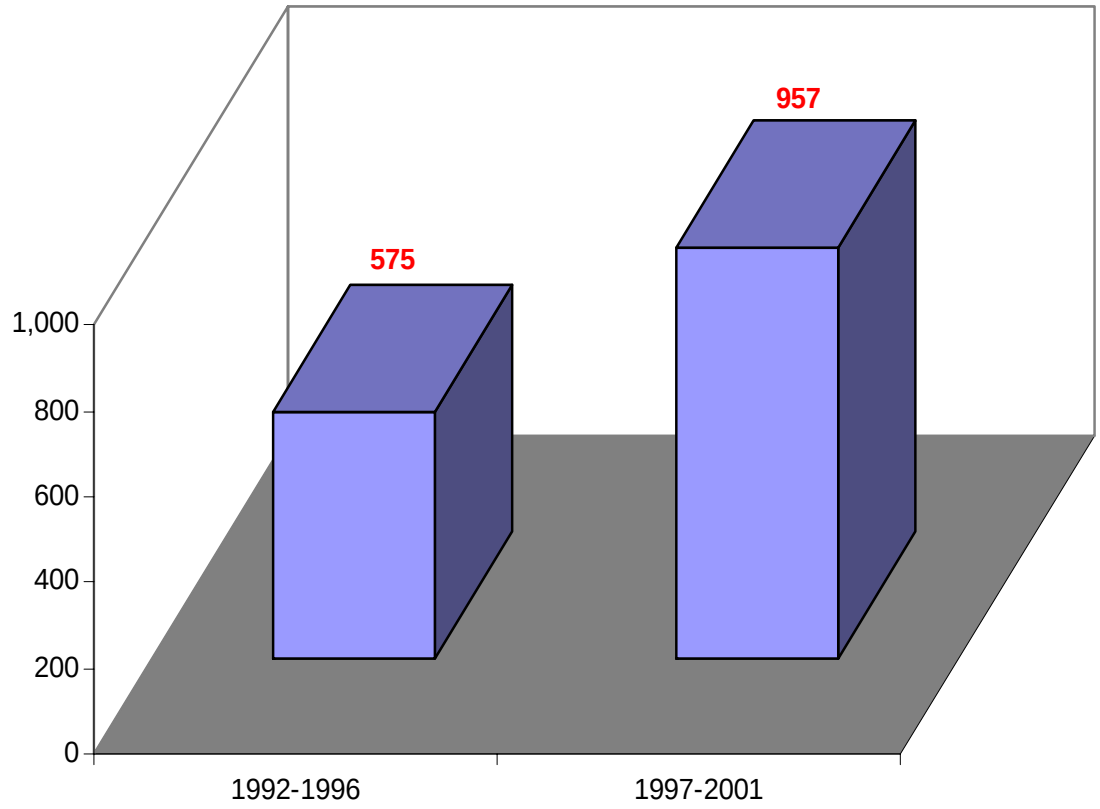
Hilton Park: Recreation & Historic Resources

Other Environmental Issues

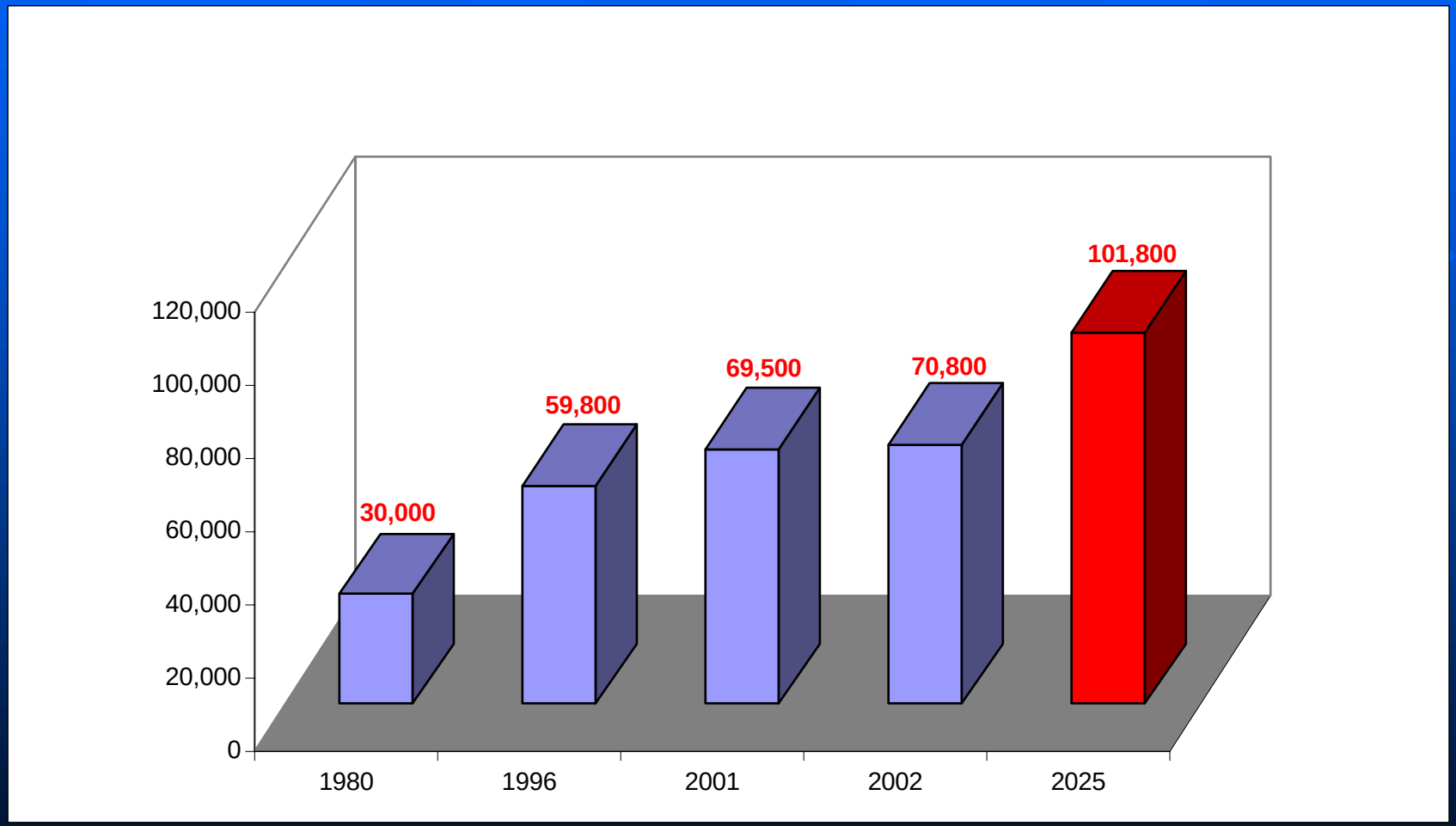
- Farmlands
- Hydrodynamics and Navigation
- Visual Resources
- Floodplains
- Groundwater
- Hazardous Materials

Scoping Report – March 2004

Number of Reported Study Area Accidents

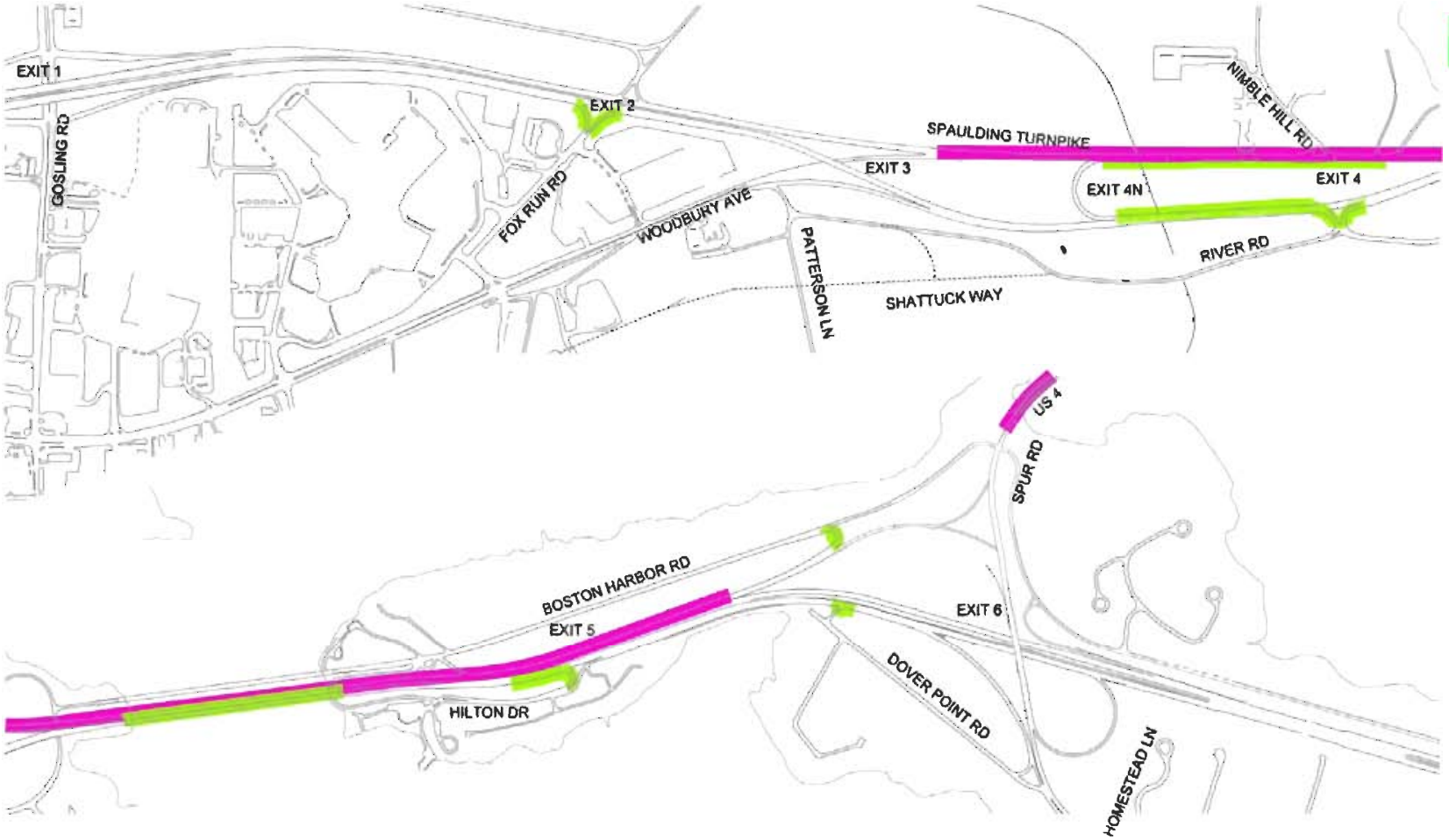


Little Bay Bridges
Average Daily Traffic Volumes



2003 6 10
8:37 AM

2003 6 10
8:45 AM



LEGEND

Capacity Deficiency

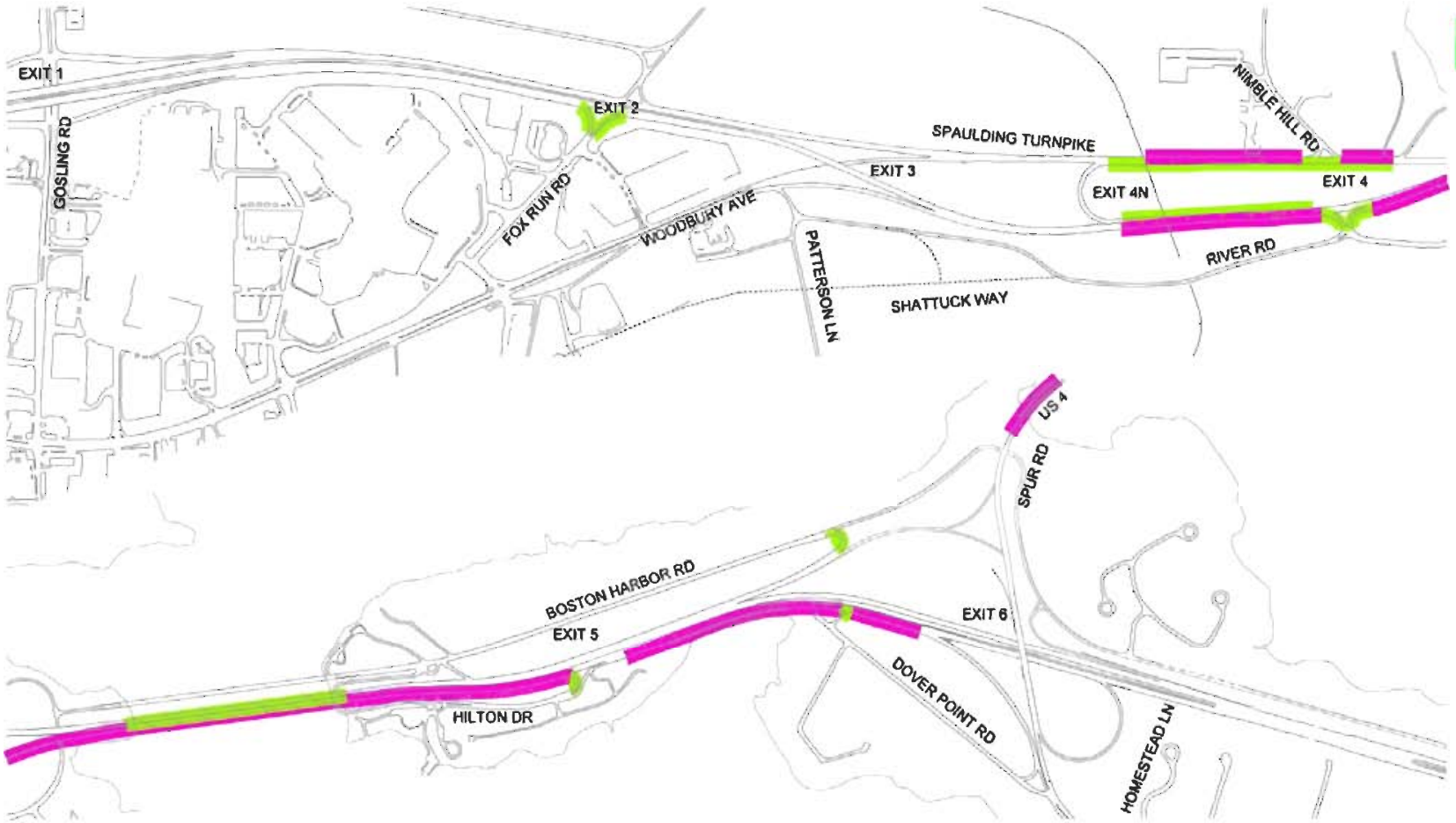
Substandard Geometrics

0 375 750 Feet

Existing AM Peak Hour Deficiencies

16 4:49 PM

16 4:44 PM



LEGEND

Capacity Deficiency

Substandard Geometrics

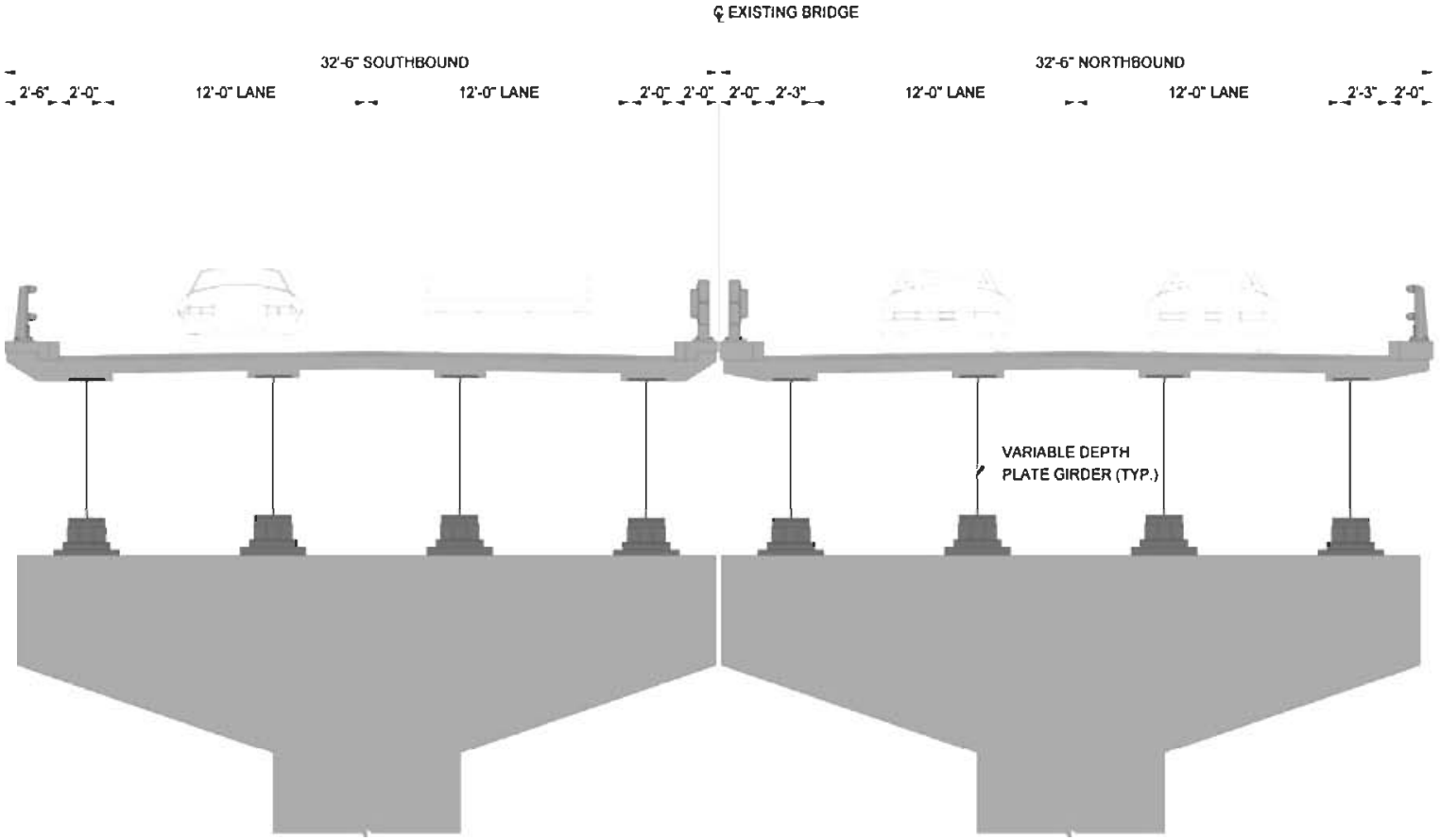
0 375 750 Feet

Existing PM Peak Hour Deficiencies

Preliminary Bridge Investigations

Little Bay Bridges – General Data

- Nine Span Structure
  - Existing SB Bridge constructed in 1966
  - Existing NB Bridge constructed in 1984
- Total Length – 1,589 feet
- Clear Width
  - SB – 28’ curb-curb
  - NB – 28’-6” curb-curb
- Main Navigation Span – 275 feet
- Vertical Clearance
  - 46’-8” (within center 100’) above mean high water
  - 45’-1” (within center 200’) above mean high water



EXISTING TRANSVERSE SECTION

LITTLE BAY BRIDGES

- LIMITED SIGHT DISTANCE (60 MPH DESIGN SPEED)
- SUBSTANDARD SHOULDER WIDTH
- MINOR DETERIORATION (GIRDER AND PIN-HANGER ASSEMBLY)
- SEISMIC VULNERALBILITY

0 2.5 5 Feet

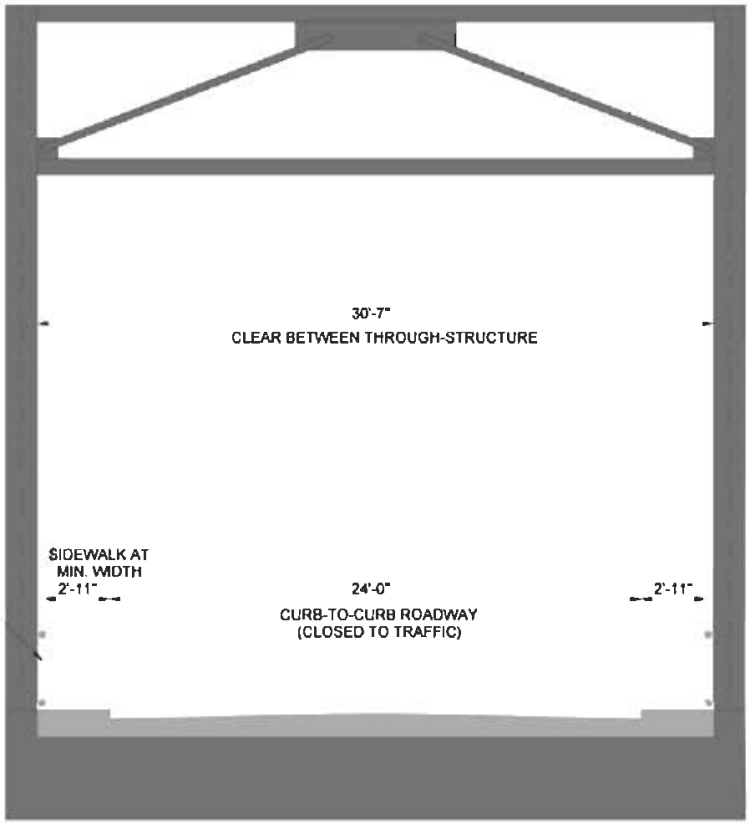
Existing Little Bay Bridges

General Sullivan Bridge

General Sullivan Bridge – General Data

- Nine Span Steel Truss Structure
  - Constructed in 1935
- Total Length – 1,528 feet
- Clear Width
  - 24’ curb-curb
  - 30’-7” between trusses
- Main Navigation Span – 275 feet
- Vertical Clearance
  - 48’-9” (within center 100’) above mean high water
  - 35’-6” (within center 200’) above mean high water
- Closed to Daily Traffic in 1984
  - Currently open to Pedestrians and Bicyclists

FACTORS AFFECTING REHABILITATION



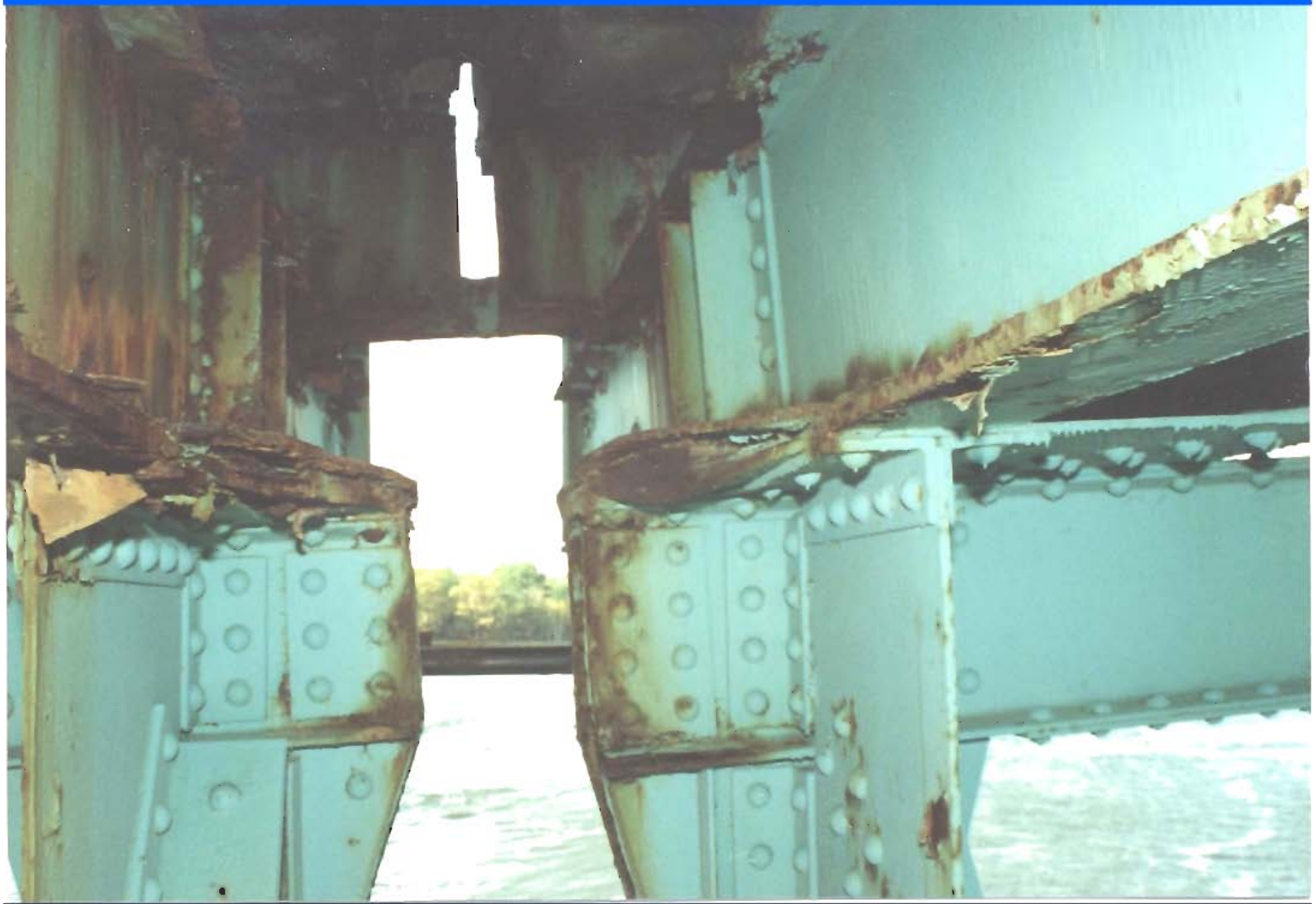
- GEOMETRY
  - LIMITED SIGHT DISTANCE (45MPH DESIGN SPEED)
  - LIMITED CROSS SECTION
- CONDITION / BRIDGE
  - MAJOR DETERIORATION OF DECK, GIRDER AND TRUSS MEMBERS
  - EXTENSIVE SUBSTRUCTURE DETERIORATION BELOW WATER LINE
- LOAD RATING
- FATIGUE AND LOW INTERNAL REDUNDANCY
- HISTORIC SIGNIFICANCE
- LEAD PAINT
- SEISMIC VULNERABILITY

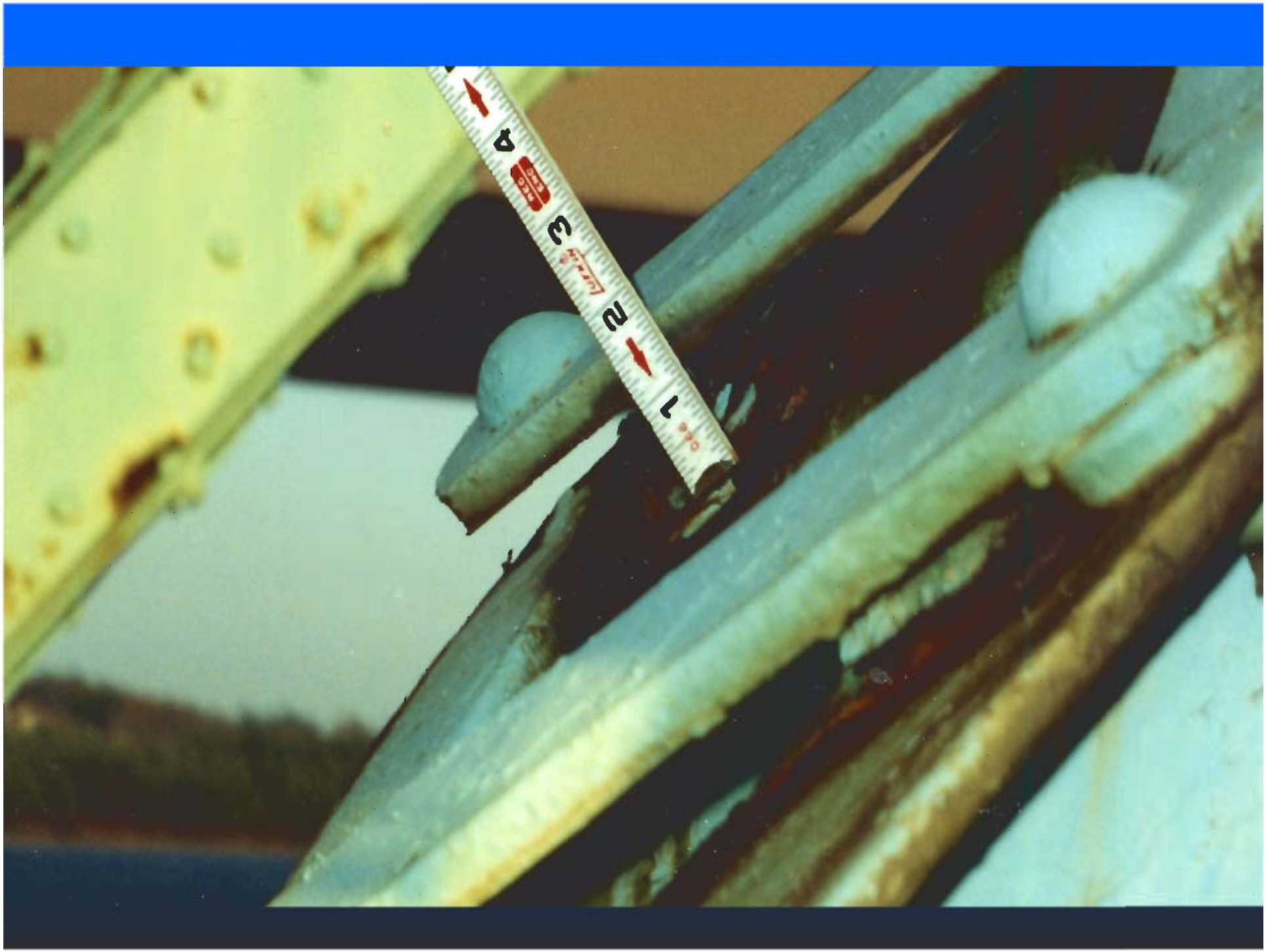
EXISTING TRANSVERSE SECTION

GENERAL SULLIVAN BRIDGE

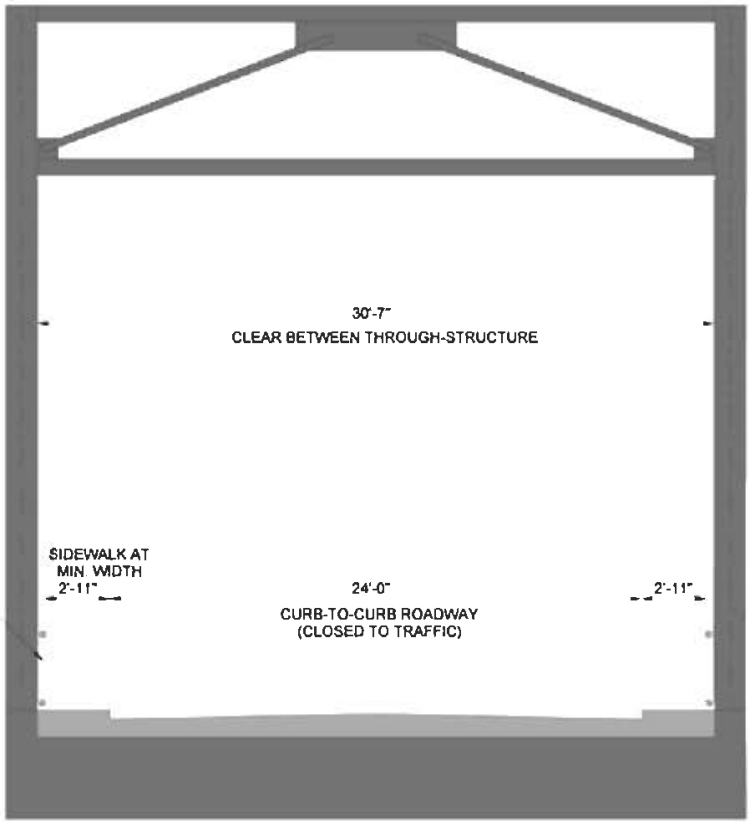
0 2.5 5 Feet

Existing General Sullivan Bridge




4
3
2
1

FACTORS AFFECTING REHABILITATION



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EXISTING TRANSVERSE SECTION

GENERAL SULLIVAN BRIDGE

0 2.5 5 Feet

Existing General Sullivan Bridge

Conceptual Alternatives

- TSM Improvements
- TDM Strategies
- Bridge Alternatives
- Roadway Alternatives

Transportation System Mangement (TSM) Measures

- Signage
- Dover
- Newington

Dover TSM 1

BOSTON HARBOR RD
SPUR RD
SPAULDING TURNPIKE
400 '
Lengthen Exit 6W Deceleration Lane
By 400 Feet By Shimming and Re-Striping
Lane and Shoulder.
DOVER POINT RD
LEGEND

Dover TSM 2

Emergency Access Gate SB On-Ramp
From Boston Harbor Road
Maintain Two SB Lanes on Mainline.
Create Standard One Lane On-Ramp
and Merge
BOSTON HARBOR RD
Remove Excess Pavement (Typ.)
SPAULDING TURNPIKE
POMEROY
COVE
LEGEND

Interim Safety Plan

Public Hearing

Newington Town Hall
205 Nimble Hill Road
Newington, New Hampshire
Wednesday, March 5, 2003
7:00 P.M.

Attention

THE SPECIAL COMMITTEE APPOINTED BY THE GOVERNOR AND EXECUTIVE COUNCIL TO DETERMINE THE NECESSITY OF THIS PROJECT CONSISTS OF:
RUTH L. GRIFFIN, EXECUTIVE COUNCILOR, CHAIRPERSON
RAYMOND J. WIECZOREK, EXECUTIVE COUNCILOR
PETER J. SPAULDING, EXECUTIVE COUNCILOR

WRITTEN STATEMENTS AND OTHER EXHIBITS MAY BE SUBMITTED TO THE CHAIRMAN OF THE SPECIAL COMMITTEE c/o:
DAVID J. BRILLHART, DIRECTOR OF PROJECT DEVELOPMENT
THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
P.O. BOX 483 CONCORD, N.H. 03302-0483
UP TO 10 DAYS AFTER THE DATE OF THE HEARING FOR INCLUSION IN THE OFFICIAL RECORD

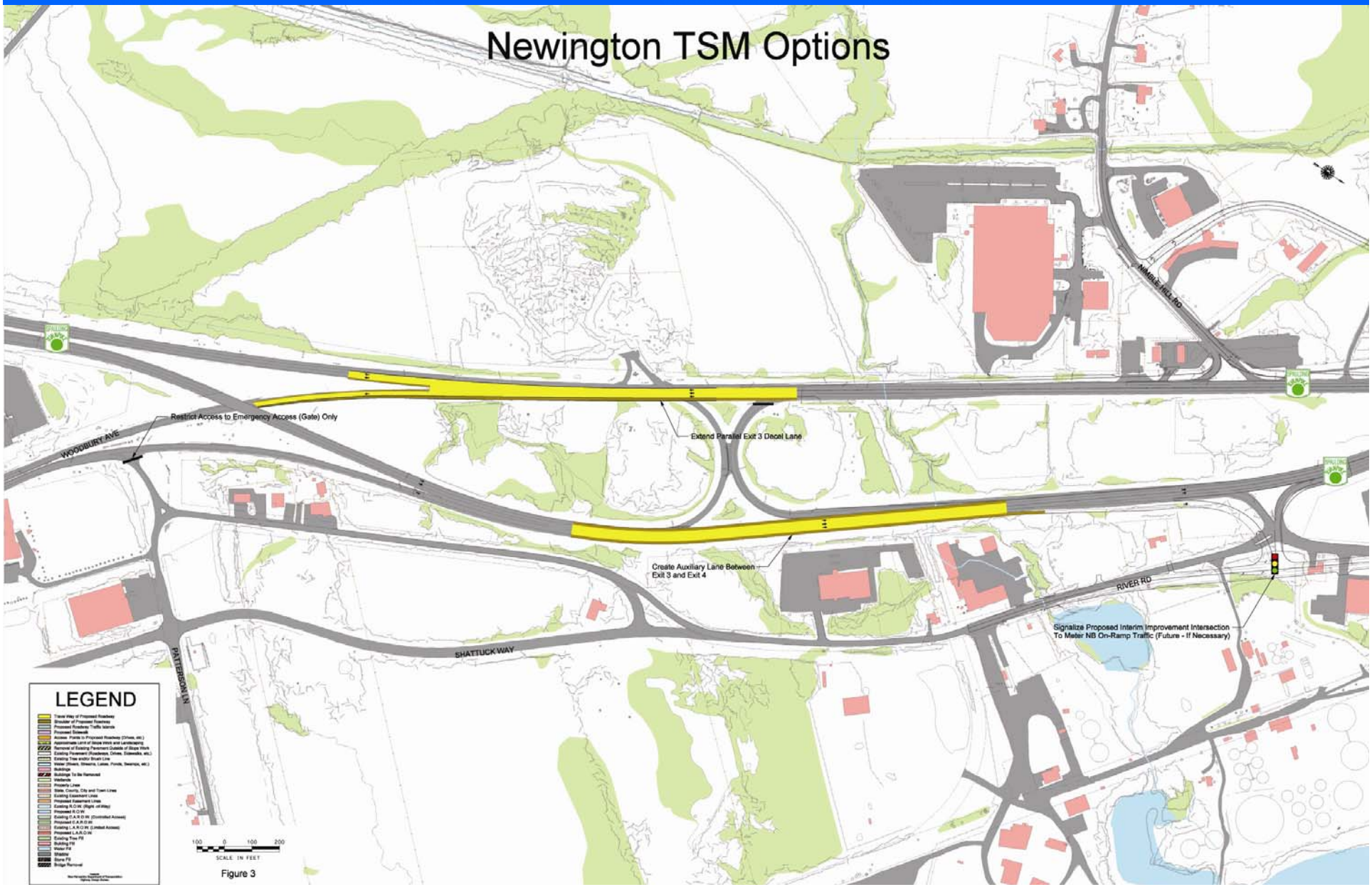
-100 0 200 400
SCALE: 1" = 400'

Proposed Work
Existing Pavement
Wetlands
Resurfacing / Driveway Improvements
Existing Buildings
Water
Buildings to be Removed
Pavement Removal

Project Information Map
Proposed Interchange Improvements
Exit 4 / River Road / Nimble Hill Road
Newington, New Hampshire
A000(115), 11238-C

New Hampshire DOT
Department of Transportation

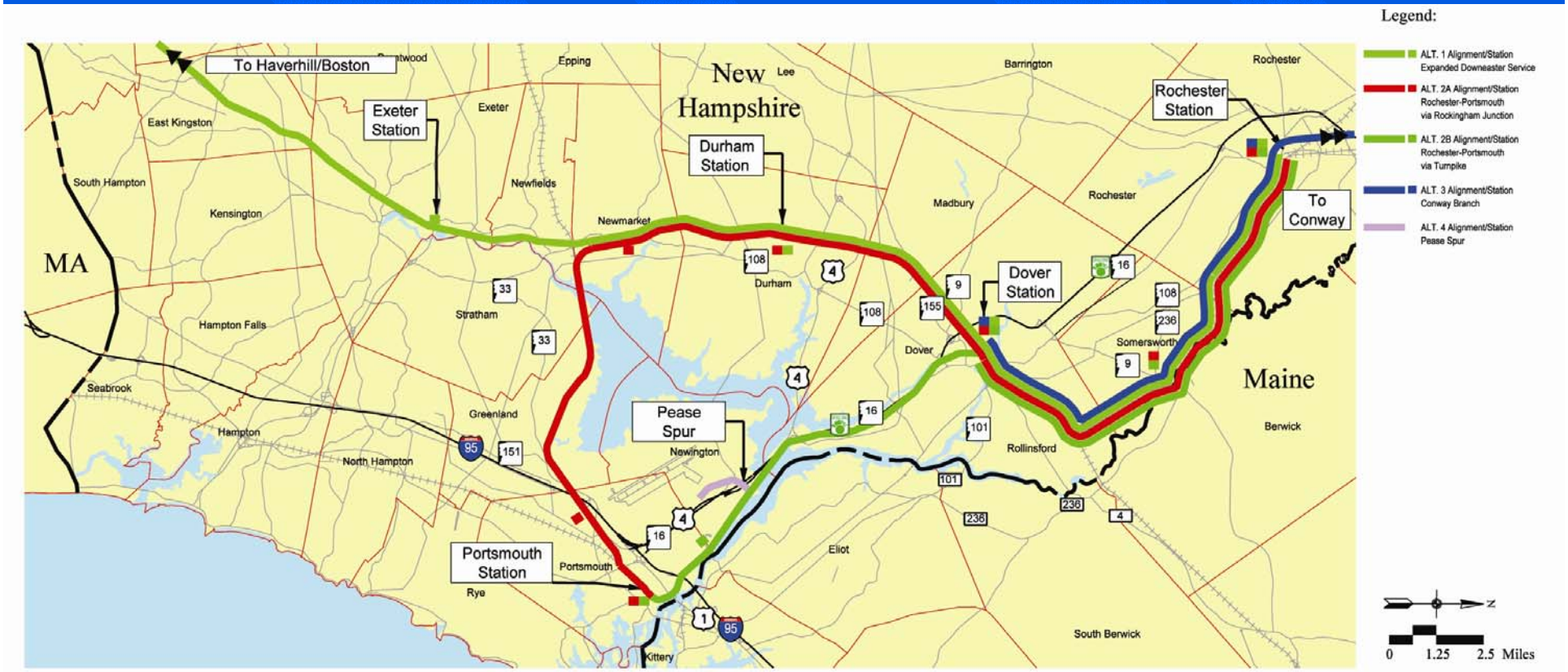
Newington TSM Options


Newington TSM Options
Restrict Access to Emergency Access (Gate) Only
Extend Parallel Exit 3 Decel Lane
Create Auxiliary Lane Between Exit 3 and Exit 4
Signalize Proposed Interim Improvement Intersection To Meter NB On-Ramp Traffic (Future - If Necessary)
WOODBURY AVE
SHATTUCK WAY
PATTERSON LN
RIVER RD
ARBELE HILL RD
LEGEND
SCALE IN FEET
Figure 3

Transportation Demand Management (TDM) Strategies

- Rail Transportation
- Bus Service
- Park and Ride Facilities
- HOV and Reversible Lanes
- Employer Based Measures

Rail Alternatives



Bus Alternatives

Rail and Bus Alternatives Capital Cost Summary

Rail Alternative 1 (w/second track Dover to MA State Line)	$107-$113m
Rail Alternative 1 (w/out second track)	$11.5-$17.5m
Rail Alternative 2A (Commuter Rail)	$144m
Rail Alternative 2B (Commuter Rail)	$167m
Rail Alternative 2B (Bus Rapid Transit)	$177m
Rail Alternative 3 (Conway Branch)	$38m
Bus Alternative 1 (Expanded Intercity Service)	$11.6m
Bus Alternative 2 (Enhanced Express Service)	$5m
Bus Alternative 3 (Enhanced Local Service)	$6.6m

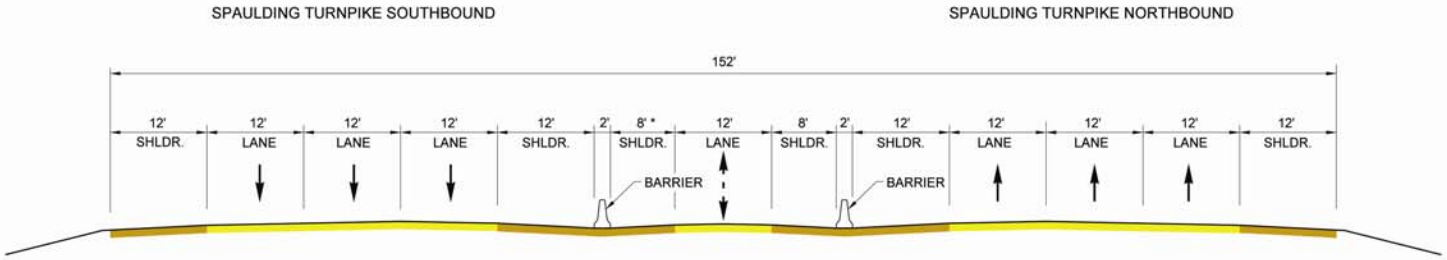
Proposed Park and Ride Facilities

- Exit 12, Rochester
- Exit 9, Dover
- US4/NH108, Durham

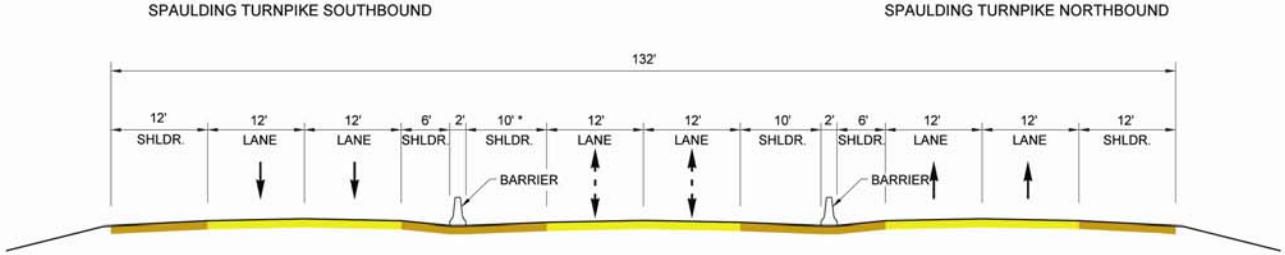
High Occupancy Vehicle (HOV) and Reversible Lane Alternatives

- Dover Toll Facility – I-95
- Exit 6 – Exit 1
- Dover Toll Facility – Exit 1

Typical Sections

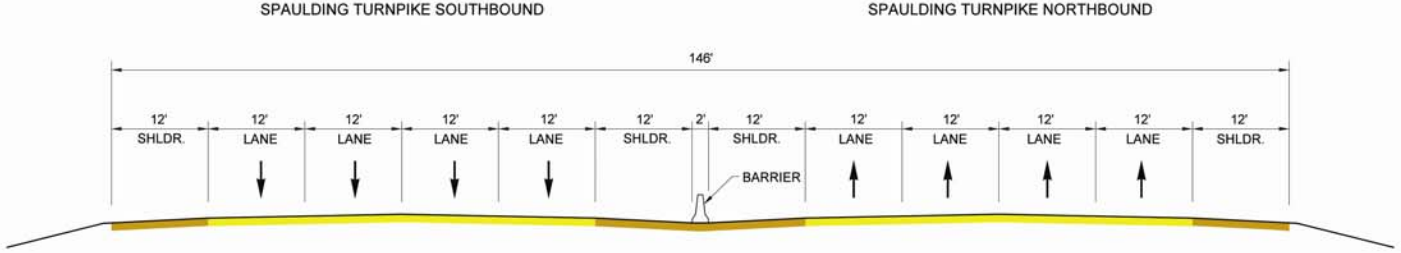


SIX LANE PLUS ONE REVERSIBLE LANE TYPICAL SECTION



(* reduced typical 4')

FOUR LANE PLUS TWO REVERSIBLE LANES TYPICAL SECTION

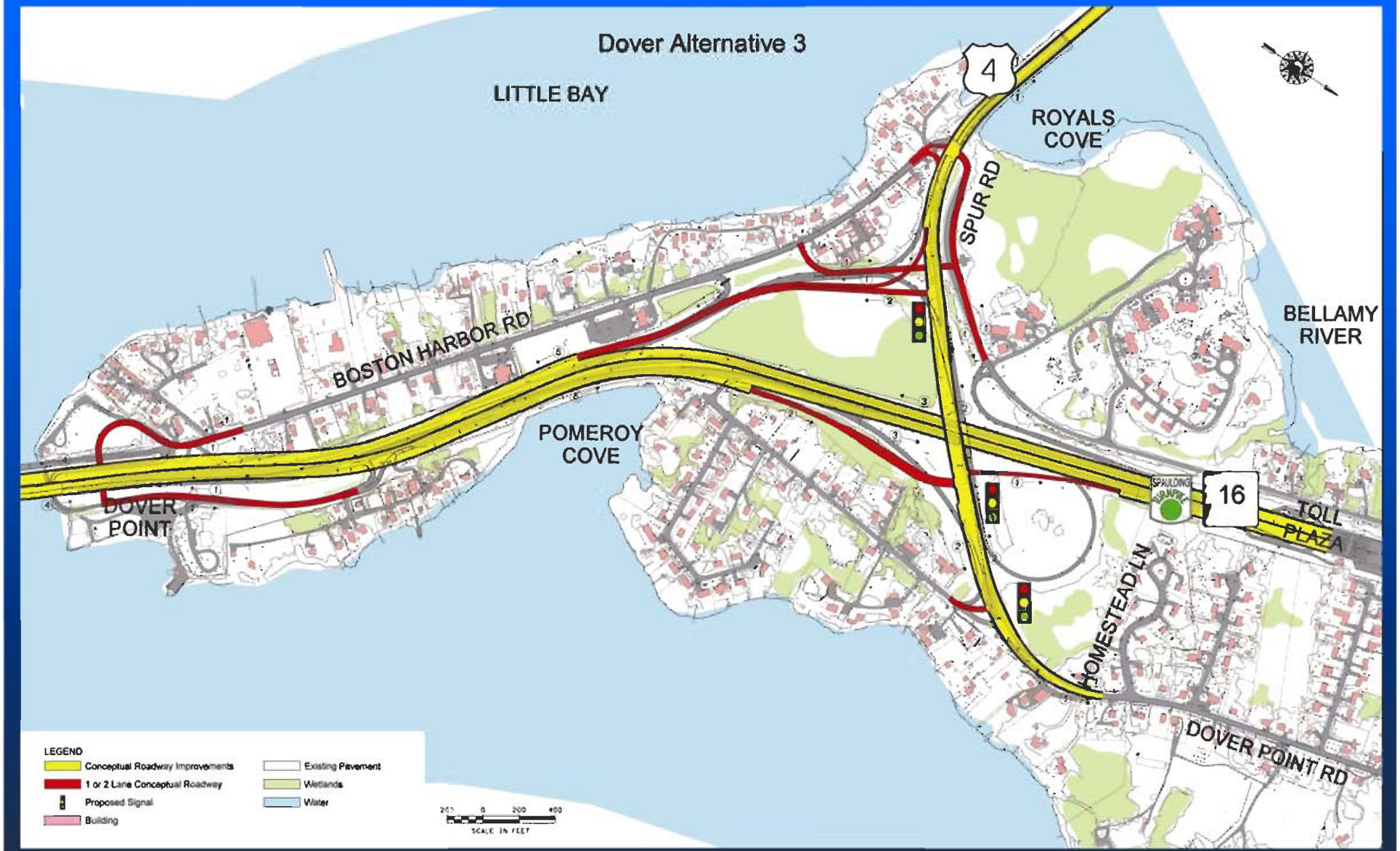


EIGHT LANE TYPICAL SECTION

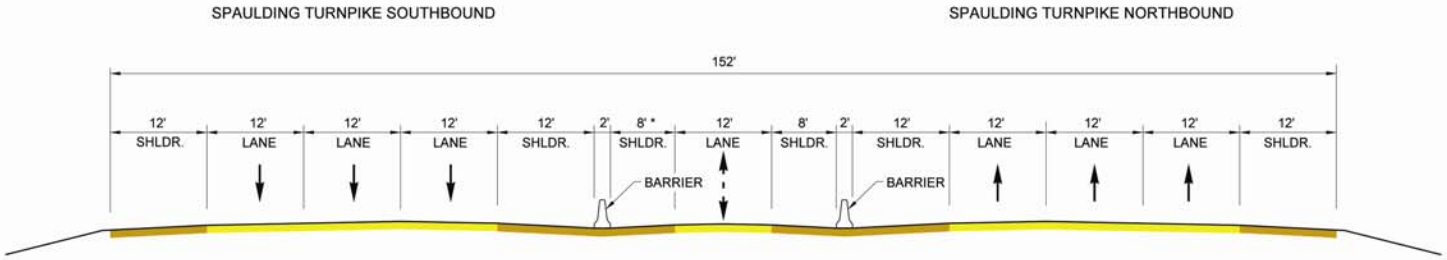
Vanasse Hangen Brustlin, Inc.

Cross Section Alternatives
Spaulding Turnpike
Newington/Dover

Date Created: $DATE$ $FILE$


Dover Alternative 3
LITTLE BAY
ROYALS COVE
SPUR RD
BELLAMY RIVER
BOSTON HARBOR RD
POMEROY COVE
DOVER POINT
4
16
TOLL PLAZA
HOMESTEAD LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Proposed Signal
Building
Existing Pavement
Wetlands
Water
SCALE IN FEET

Typical Sections



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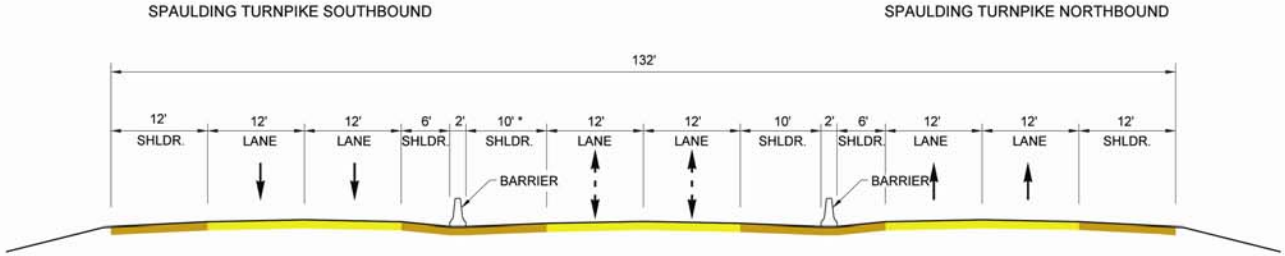
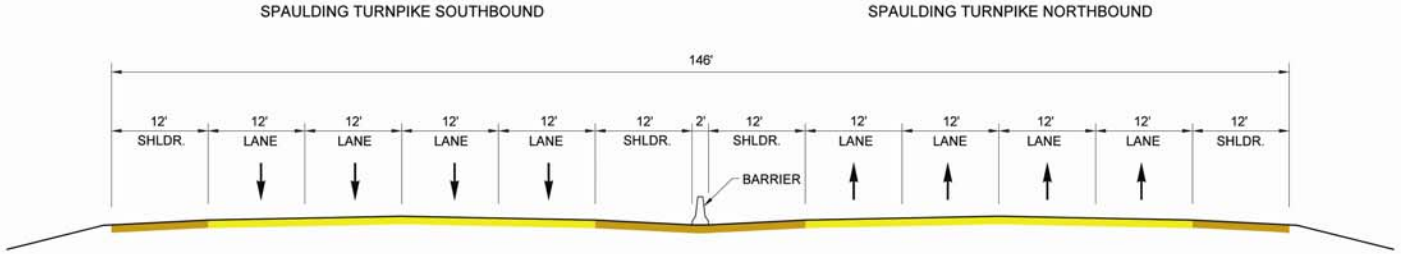


(* reduced typical 4')

FOUR LANE PLUS TWO REVERSIBLE LANES TYPICAL SECTION



EIGHT LANE TYPICAL SECTION

Vanasse Hangen Brustlin, Inc.

Cross Section Alternatives
Spaulding Turnpike
Newington/Dover

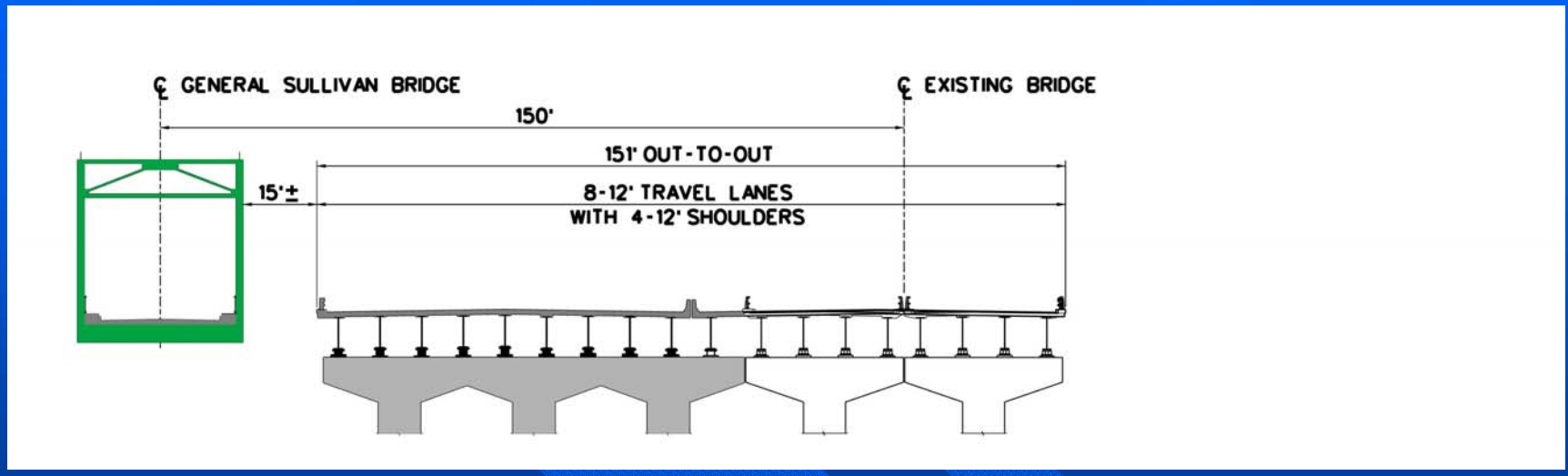
Date Created: $DATE$ $FILE$

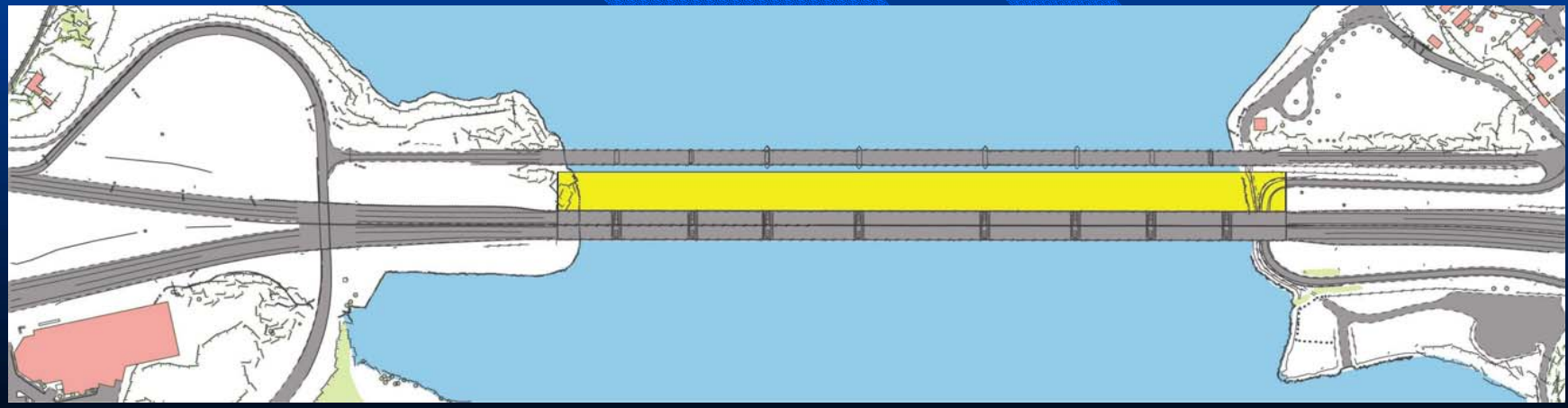
Employer Based Measures

- Employee Transit Pass Support
- Ride Sharing/Van Pools
- Alternative Work Schedules
- Preferential Parking
- Bicycle/Pedestrian Amenities
- Guaranteed Ride Home
- On Site Convenience Retail Services

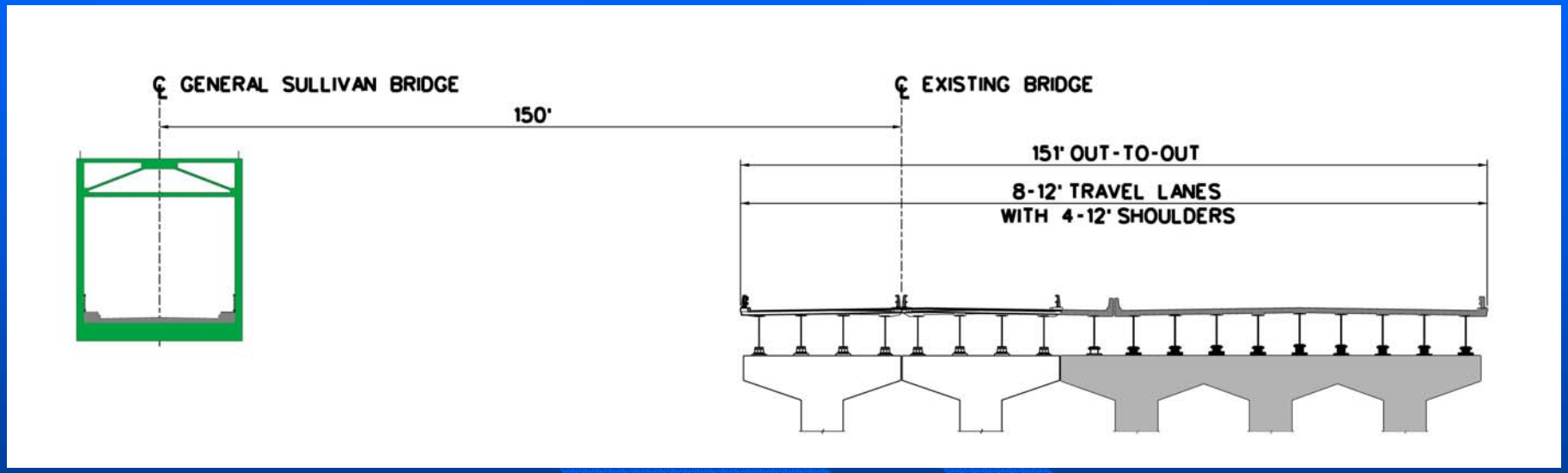
Little Bay Bridges Alternatives

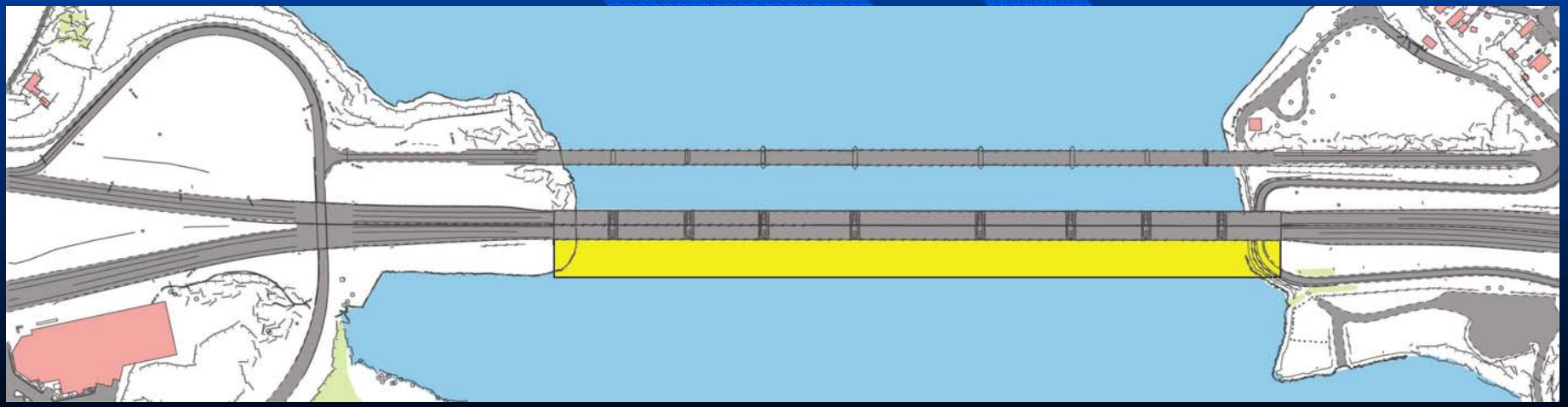
Conceptual Cross-Section
Widen to West Side



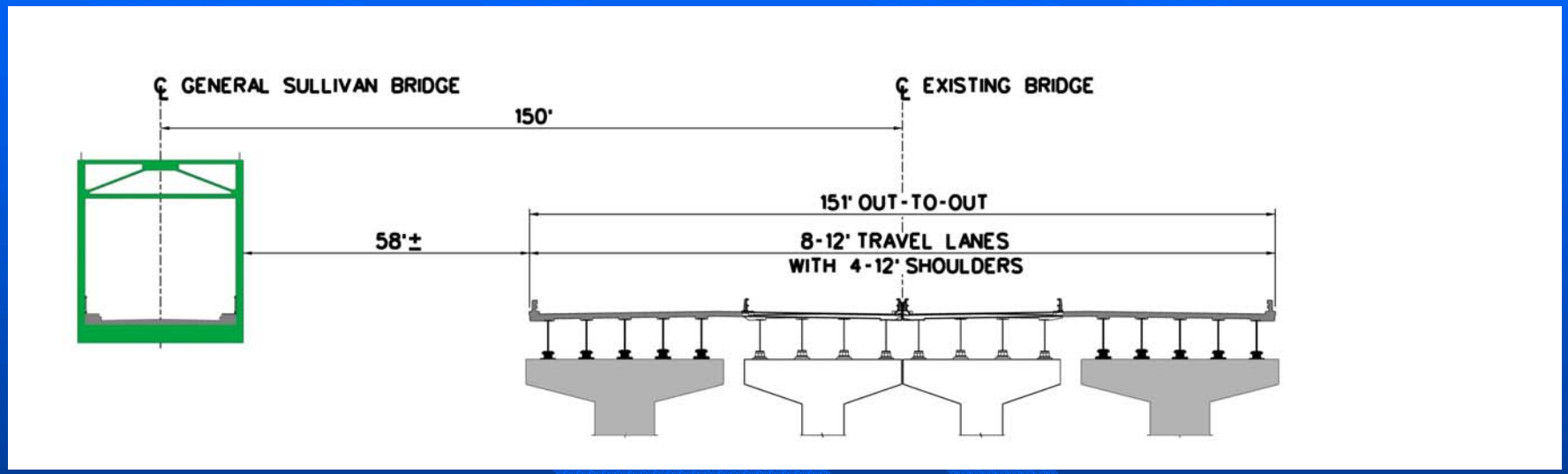


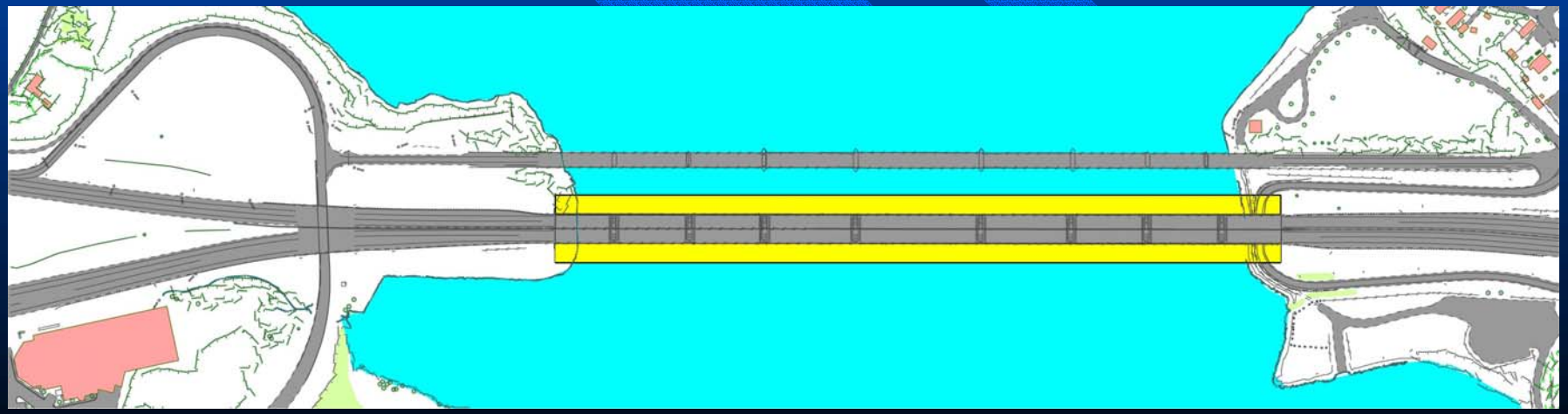
Conceptual Cross-Section
Widen to East Side



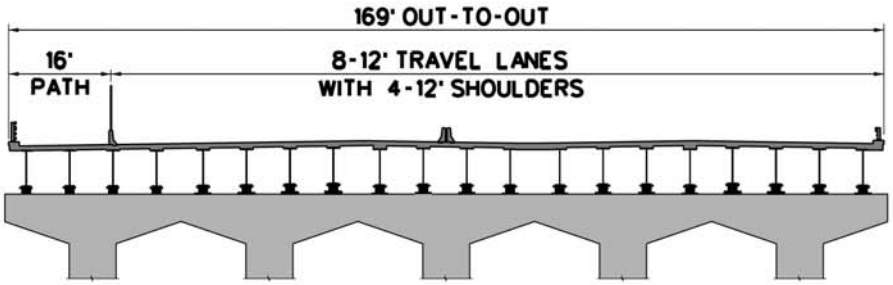


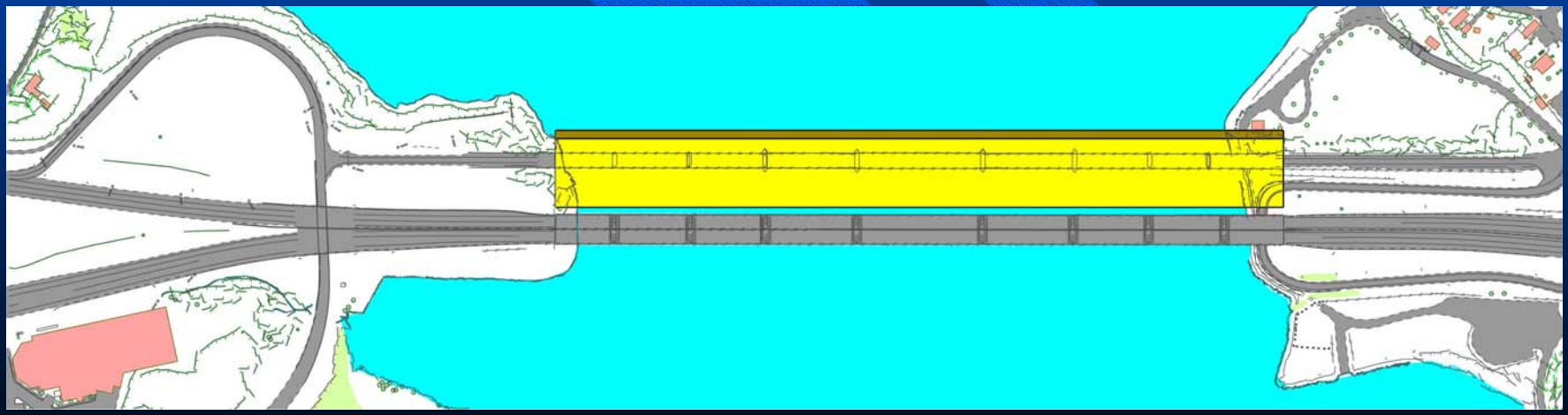
Conceptual Cross-Section
Widen Both Sides



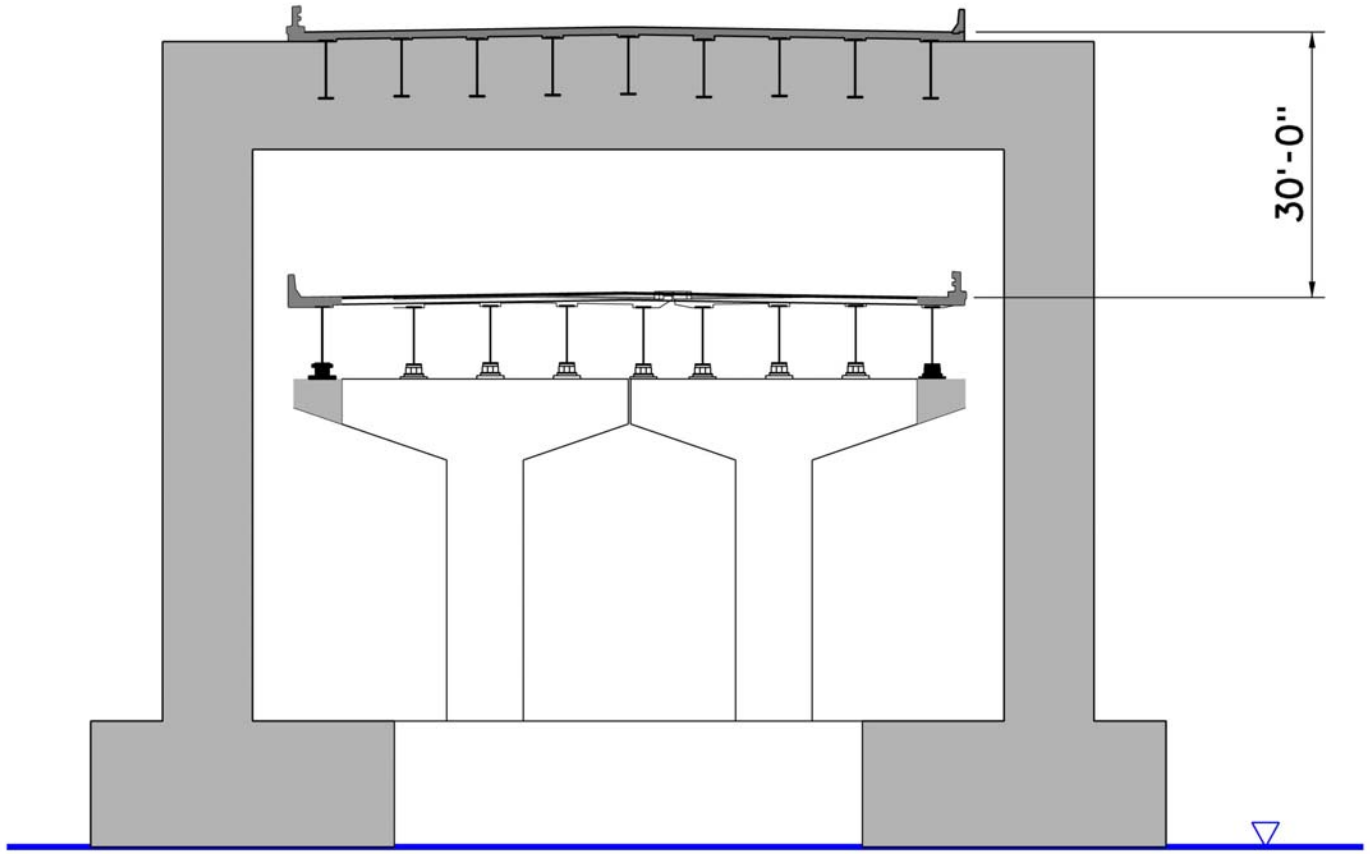


Conceptual Cross-Section
New Bridge with Multi-Use Path

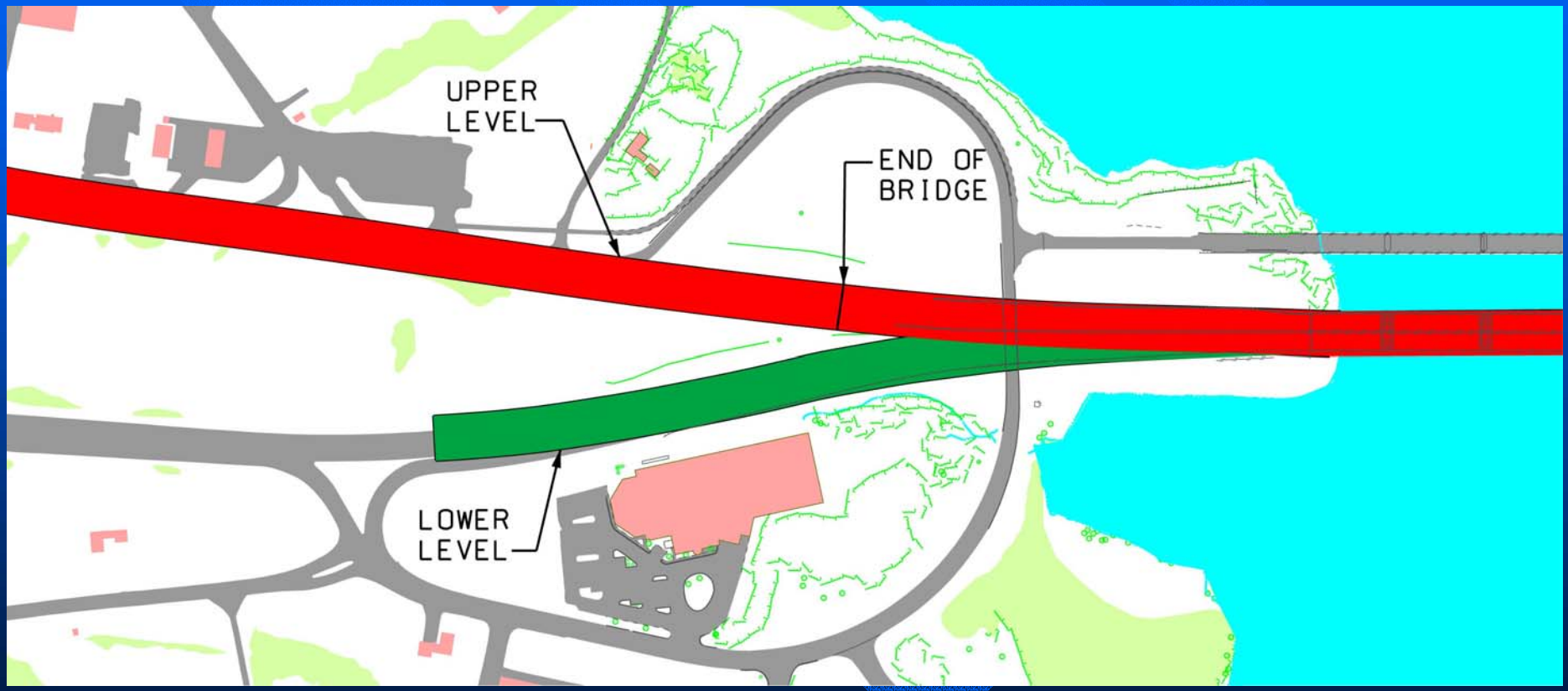




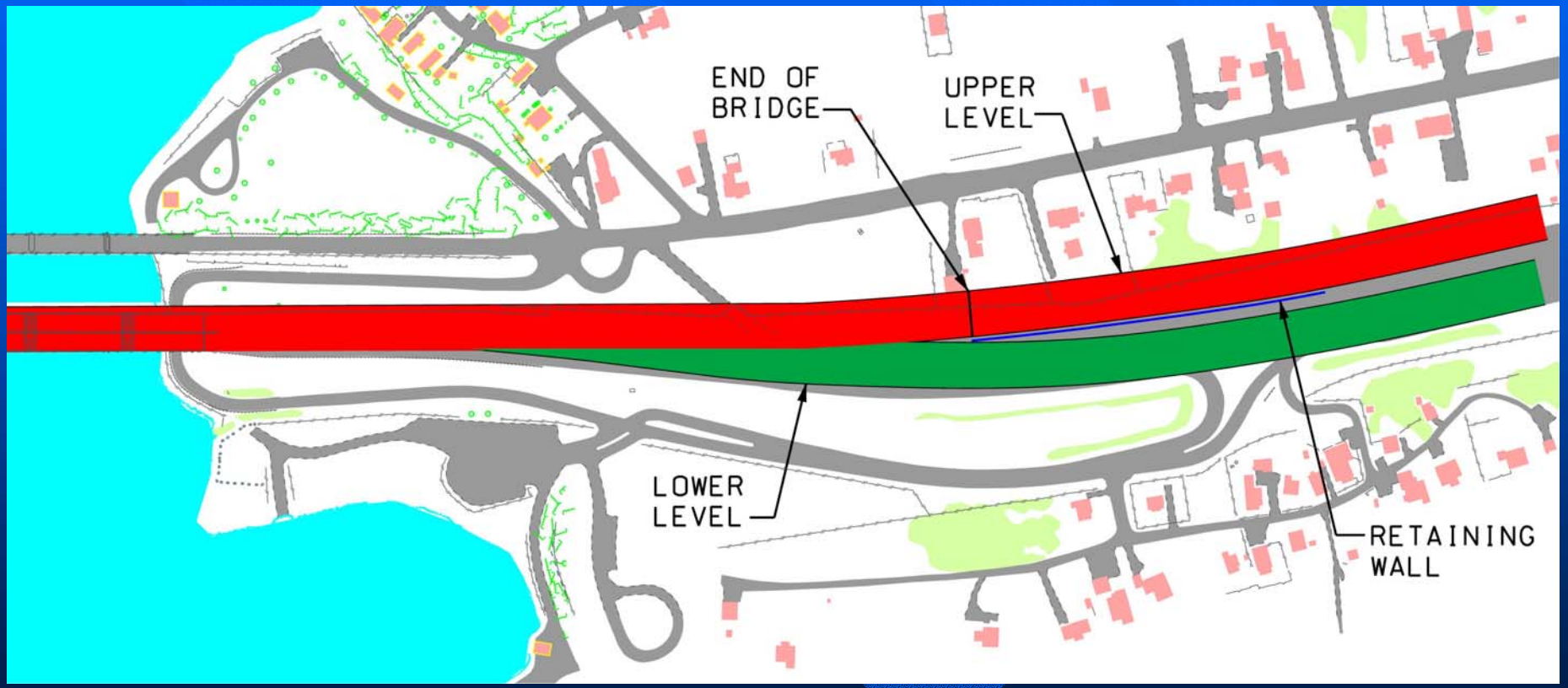
Double-Decker Section

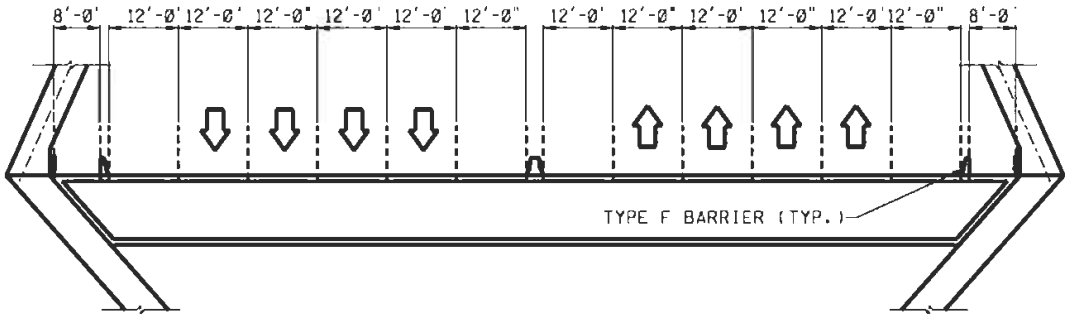


Double-Decker South Approach



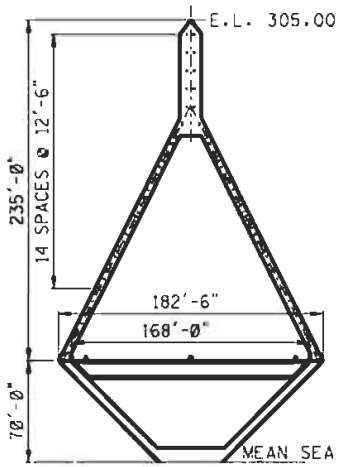
Double-Decker North Approach





ROADWAY SECTION AT MAIN PIER

N.T.S.



SECTION AT MAIN PIER

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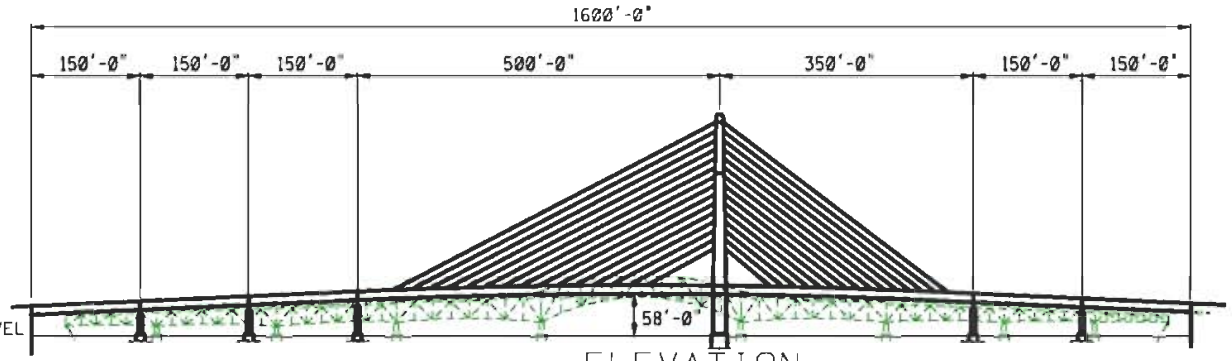

ELEVATION

N.T.S.

CABLE STAYED BRIDGE REPLACEMENT STRUCTURE

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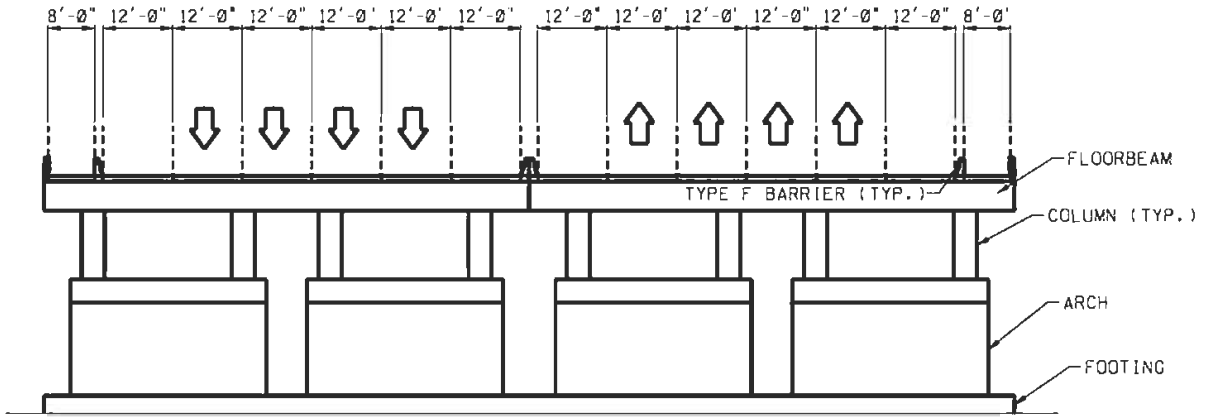

SECTION A-A

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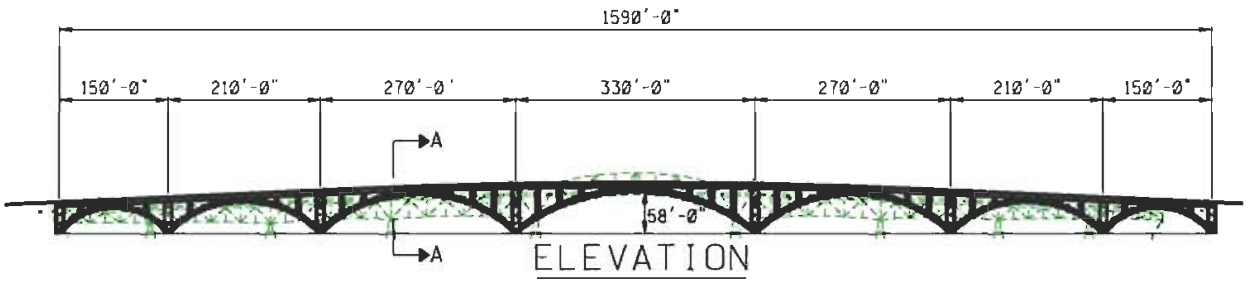

ELEVATION

N.T.S.

CONCRETE ARCH
BRIDGE REPLACEMENT STRUCTURE

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General Sullivan Bridge Alternatives

Reuse Alternatives and Cost

	Cost
Multi-Use Path (Pedestrians and Bicyclists)	$19 M
Pedestrians, Bicyclists and Vehicles (6 Ton Limit)	$20 M
Pedestrians, Bicyclists and Local Traffic (No Weight Restrictions)	$22 M
Pedestrians, Bicyclists and Transit Vehicles Only	$22 M
Replacement Bridge (Includes removal costs)	$36 M
Remove General Sullivan Bridge (does not include cost of replacing bike/ped connection)	$ 5 M

Future Maintenance Cost
General Sullivan Bridge Rehabilitation

- Every 25 years – Repainting and Structure Repair
  - – $4.3 million (today's dollars)
- Every 35 years – Deck Replacement
  - – $1.4 million (today's dollars)

General Sullivan and Little Bay Bridge Combined Alternatives

	Little Bay Bridge Alternative	Little Bay Bridge Cost	General Sullivan Bridge Cost	Little Bay Bridge Removal Cost	General Sullivan Bridge Removal Cost	Total Cost
Gen. Sullivan Rehabilitation	Rehabilitation & Widening	$46 M	$22 M	--	--	$68 M
	Rehabilitation – Double-Decker	$75 M	$22 M	--	--	$97 M
	Replacement – Steel Girder	$55 M	$22 M	$5 M	--	$82 M
	Replacement – Segmental Concrete	$63 M	$22 M	$5 M	--	$90 M
Gen. Sullivan Removal	Rehabilitation & Widening	$52 M*	--	--	$5 M	$57 M
	Replacement – Steel Girder	$62 M*	--	$5 M	$5 M	$72 M
	Replacement – Segmental Concrete	$74 M*	--	$5 M	$5 M	$84 M
	Replacement – Concrete Arch	$87 M*	--	$5 M	$5 M	$97 M
	Replacement – Cable-Stayed	$90 M*	--	$5 M	$5 M	$100 M

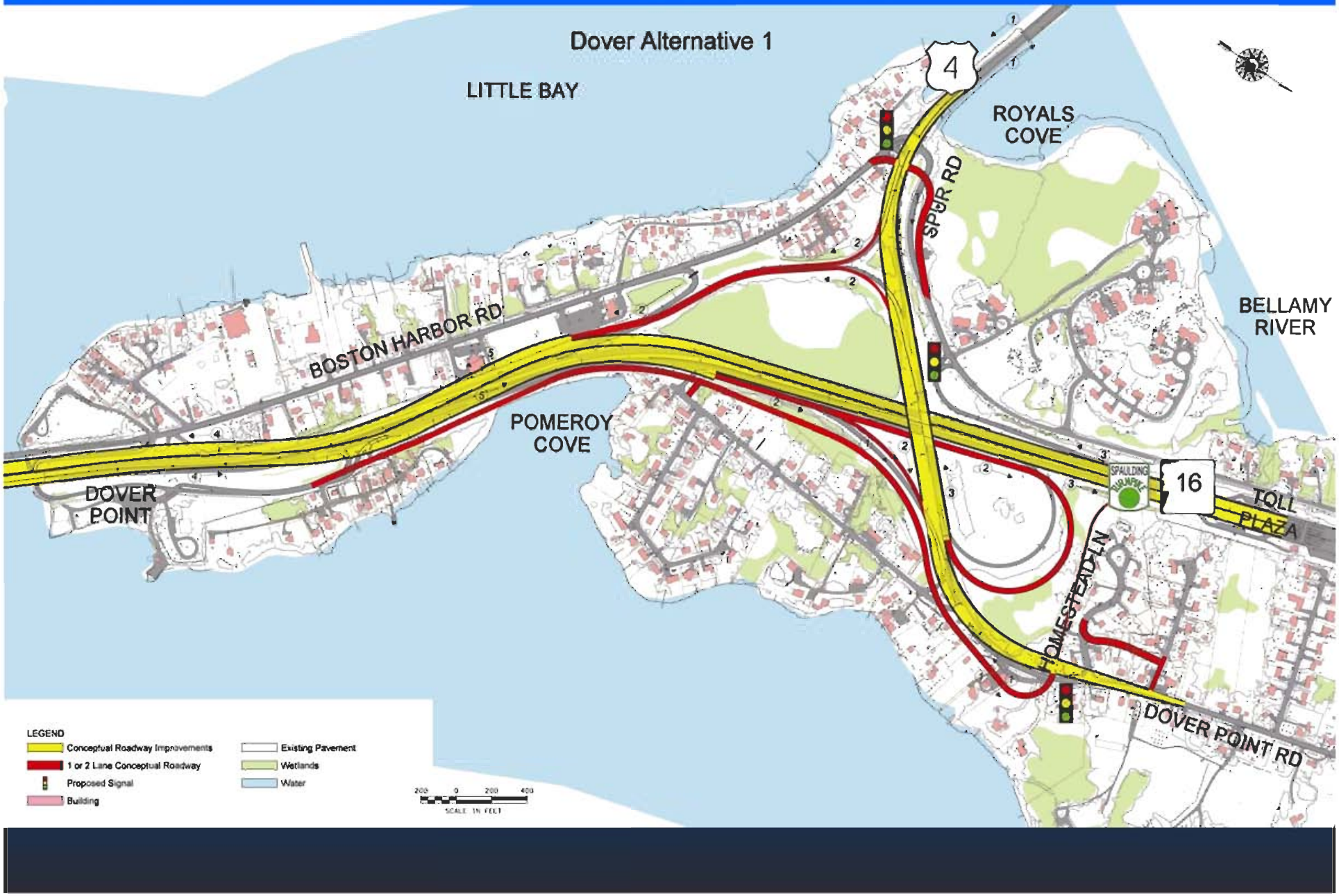
*Estimated costs include a multi-use path

Estimated Costs include construction costs, mobilization costs, and 10% CE costs.

Estimated Costs represent "Program Level" costs for the Newington-Dover EIS, Alternatives Development Phase, 2/26/04.

Conceptual Roadway Alternatives

- Dover
- Newington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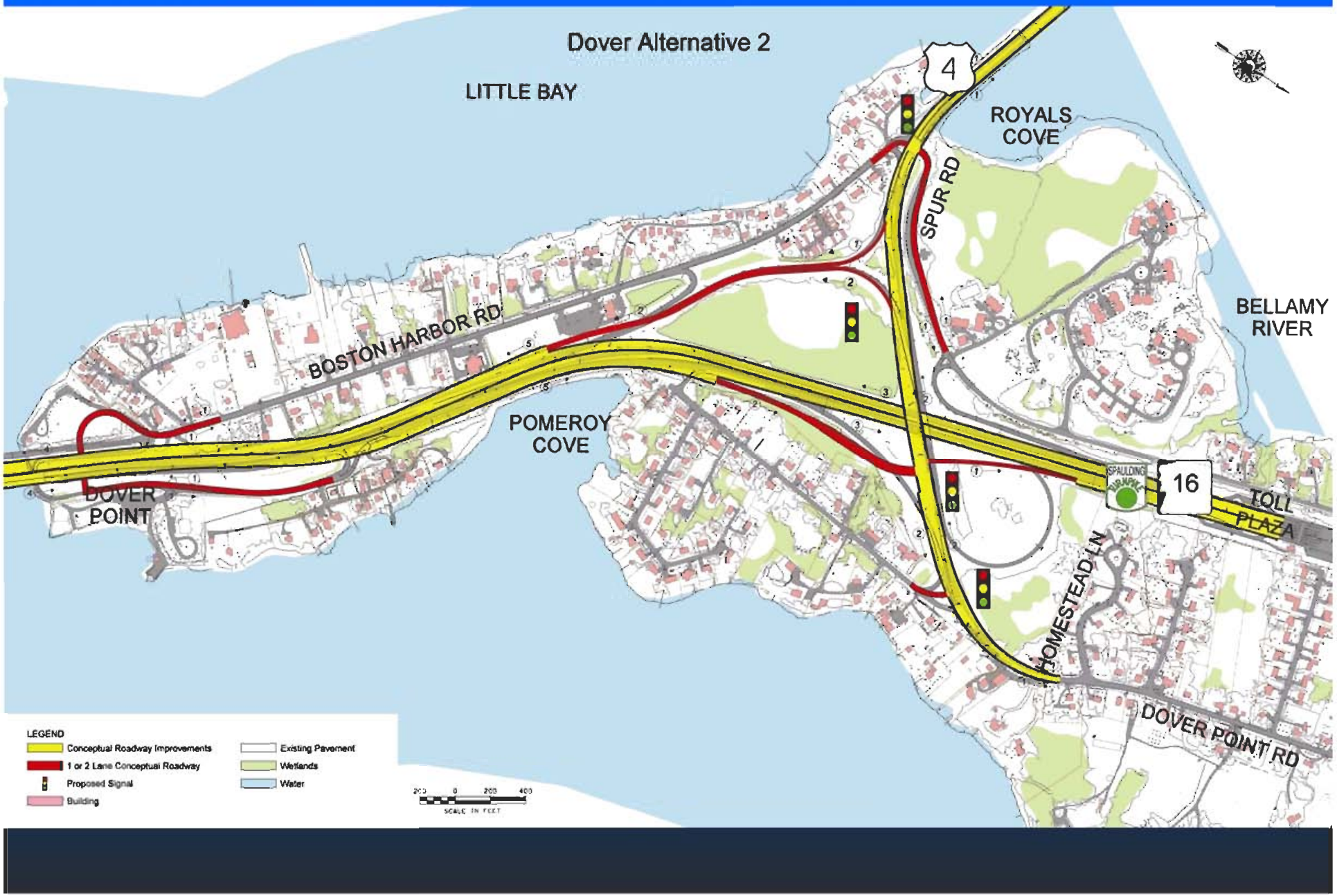
LITTLE BAY
ROYALS COVE
SPUR RD
BELLAMY RIVER
BOSTON HARBOR RD
POMEROY COVE
DOVER POINT
SPAULDING AIRPARK
16
TOLL PLAZA
HOMESTEAD LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Proposed Signal
Building
Existing Pavement
Wetlands
Water
200 0 200 400
SCALE IN FEET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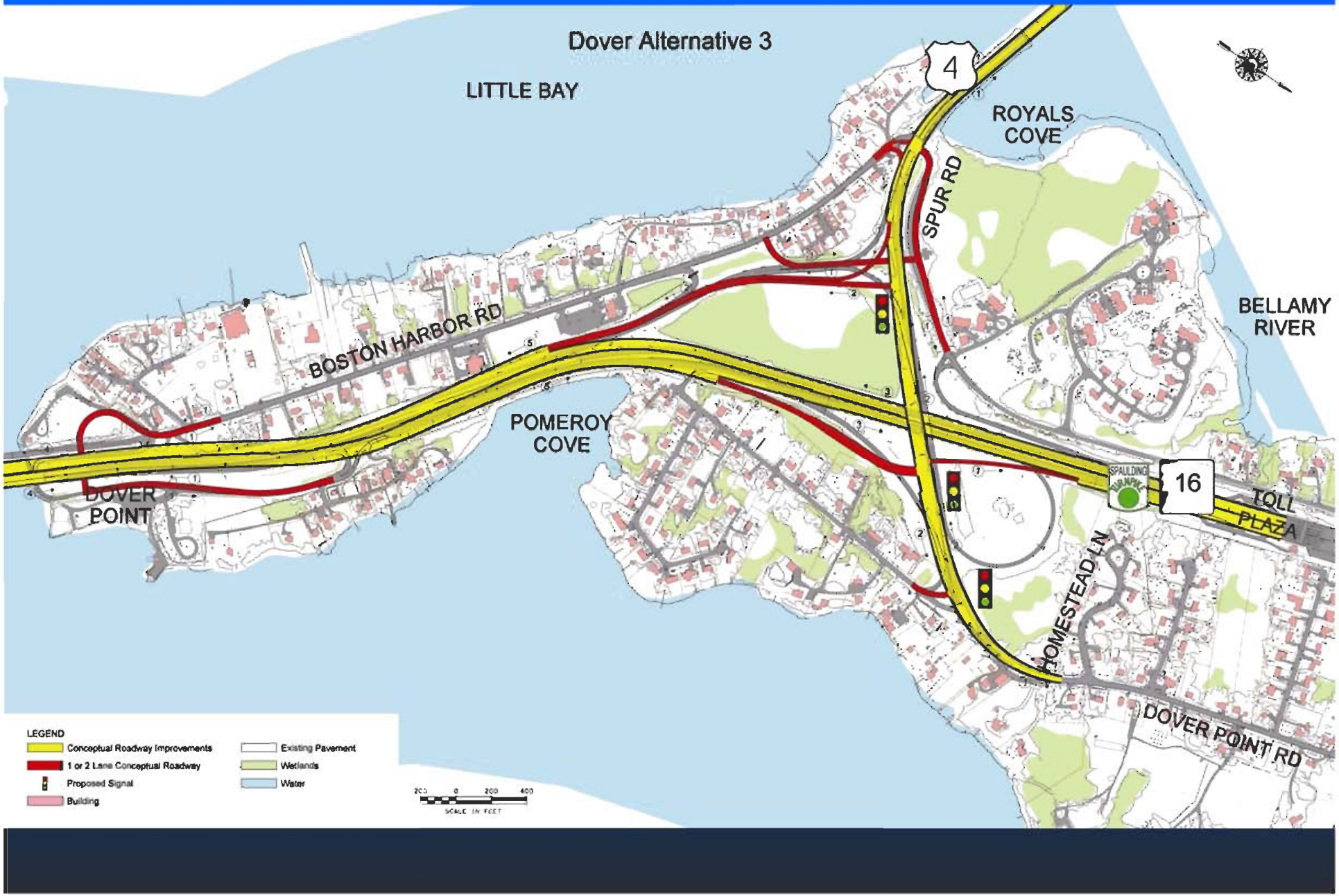
ROYALS COVE
SPUR RD
BELLAMY RIVER
BOSTON HARBOR RD
POMEROY COVE
DOVER POINT
SPAULDING TURNPIKE
16
TOLL PLAZA
HOMESTEAD LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Proposed Signal
Building
Existing Pavement
Wetlands
Water
SCALE IN FEET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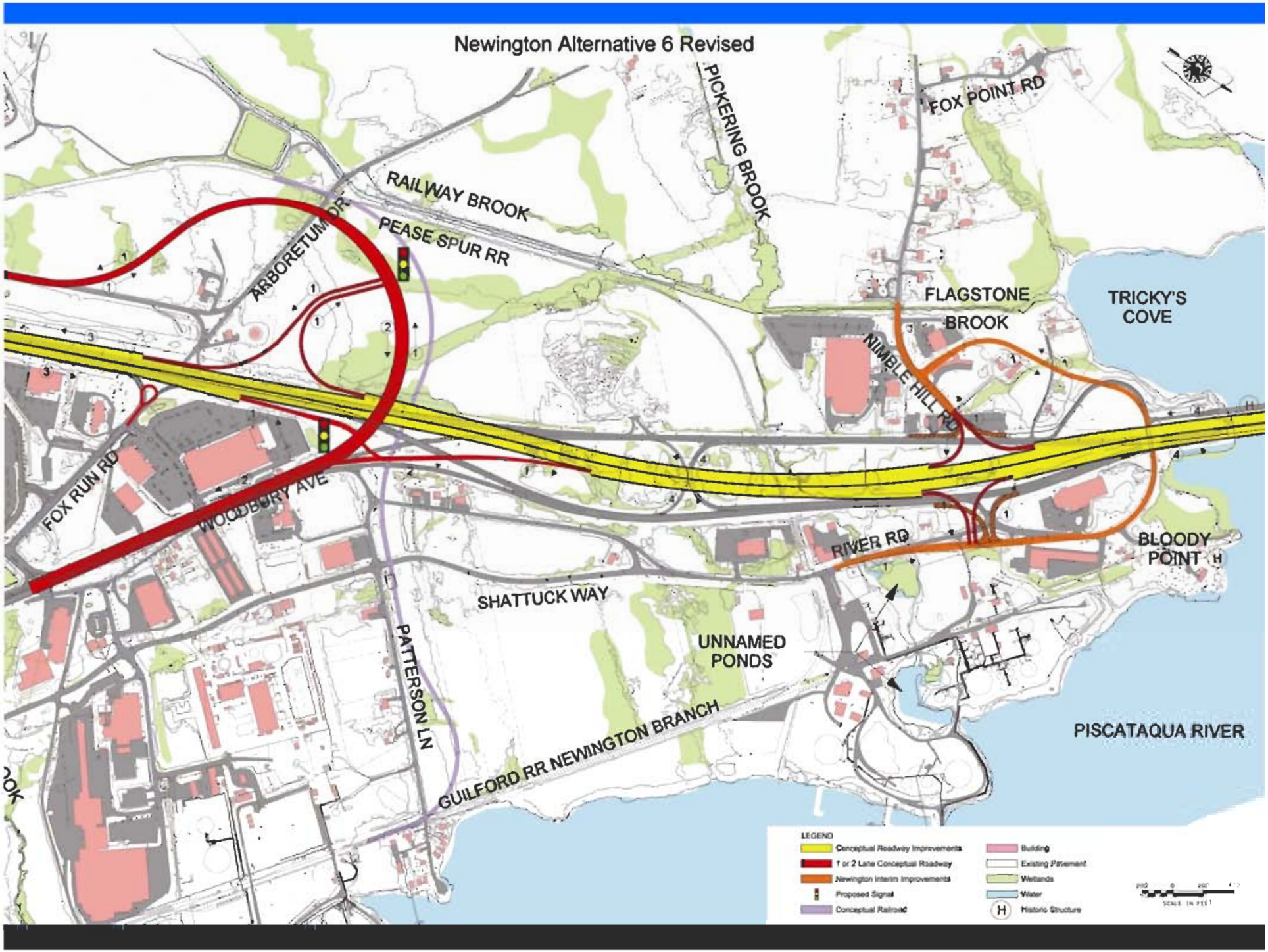
LITTLE BAY
ROYALS COVE
SPUR RD
BELLAMY RIVER
BOSTON HARBOR RD
POMEROY COVE
DOVER POINT
SPAULDING
16
TOLL PLAZA
HOMESTEAD LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Proposed Signal
Building
Existing Pavement
Wetlands
Water
200 0 200 400
SCALE IN FEET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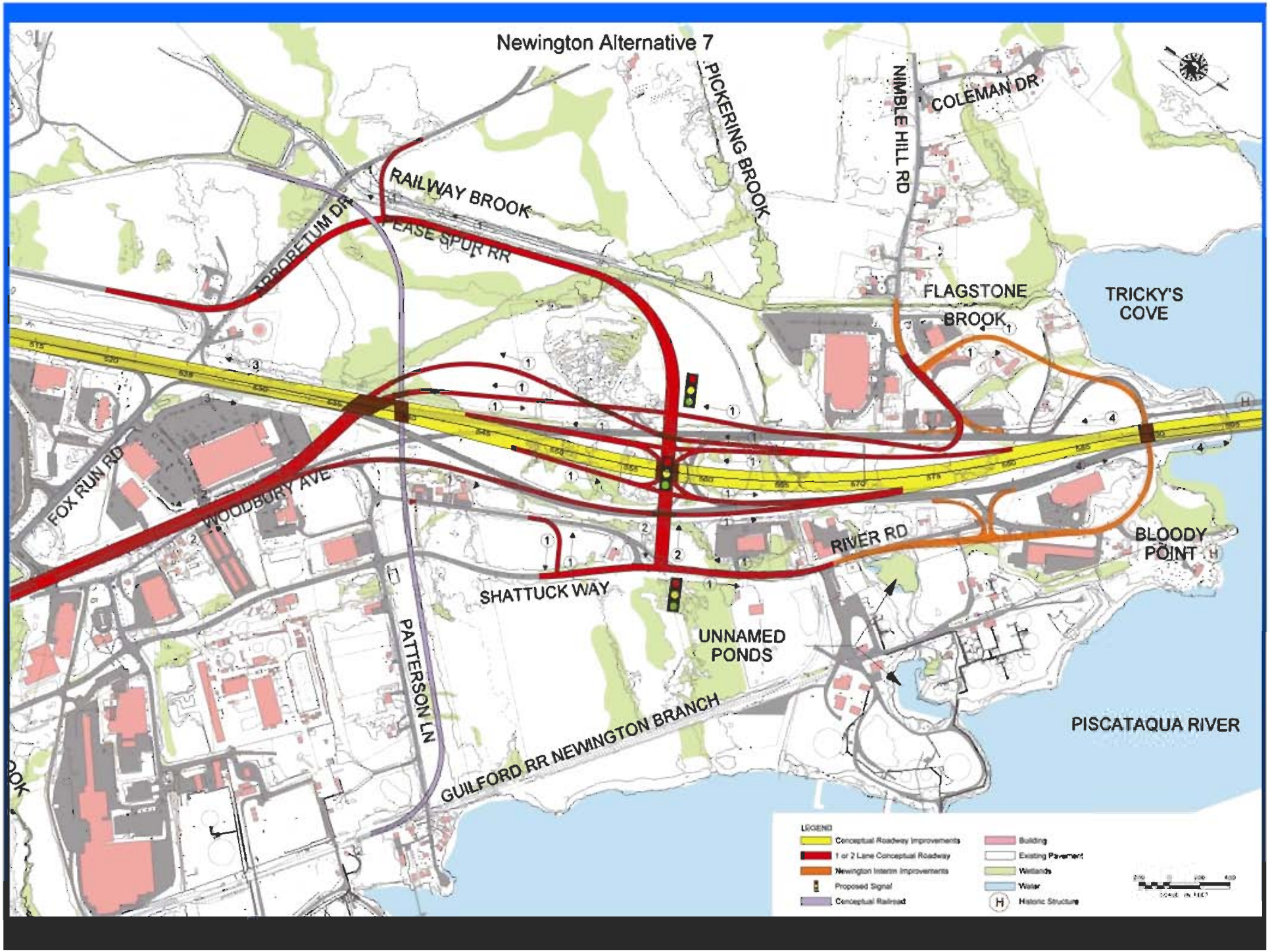
PICKERING BROOK
FOX POINT RD
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE
BROOK
TRICKY'S
COVE
NIMBLE HILL RD
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY
POINT
SHATTUCK WAY
UNNAMED
PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Newington Interim Improvements
Proposed Signal
Conceptual Railroad
Building
Existing Pavement
Wetlands
Water
Historic Structure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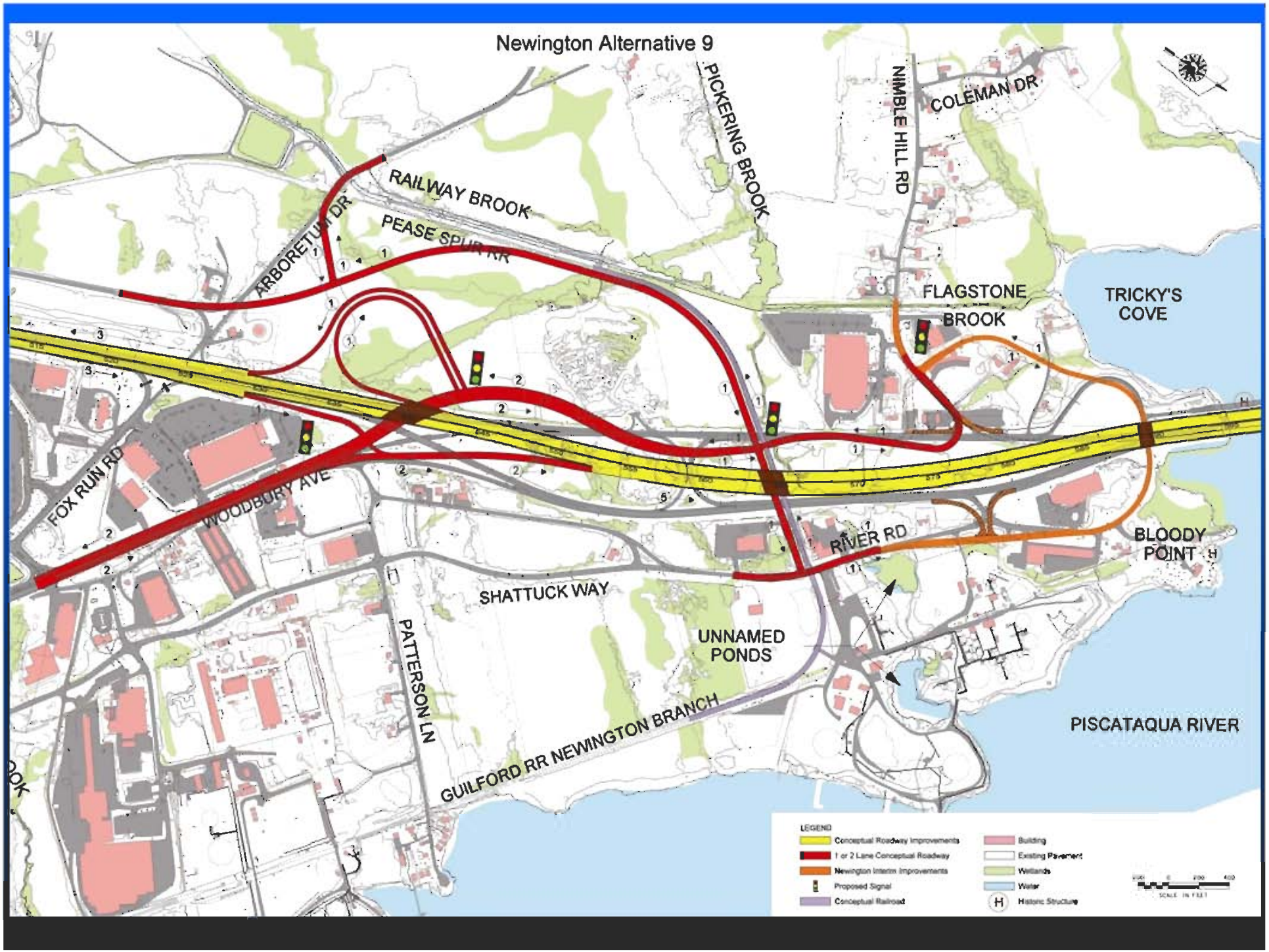
PICKERING BROOK
NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
UNNAMED PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Newington Interim Improvements
Proposed Signal
Conceptual Railroad
Building
Existing Pavement
Wetlands
Water
Historic Structure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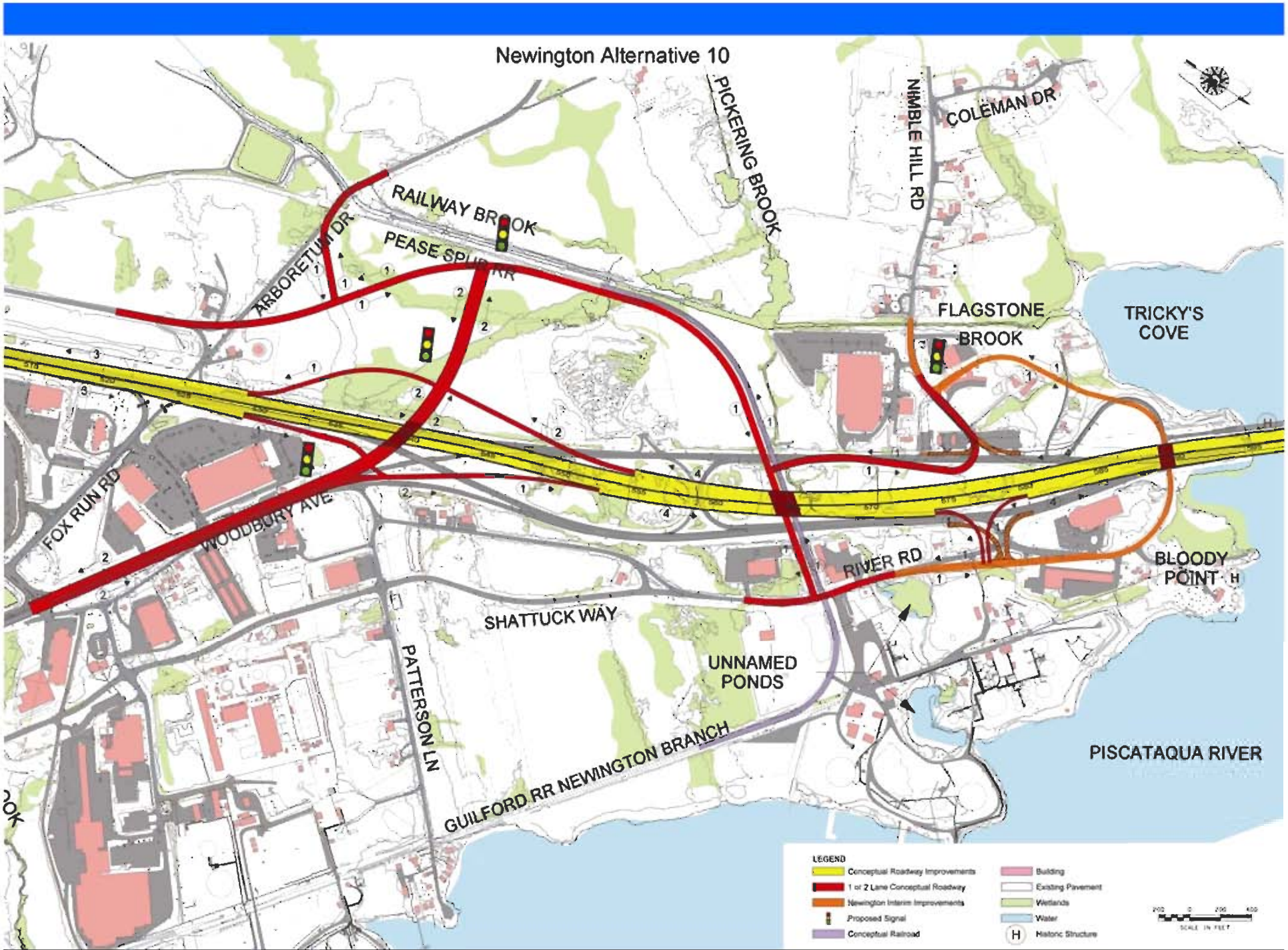
COLEMAN DR
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
PATTERSON LN
UNNAMED PONDS
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Newington Interim Improvements
Proposed Signal
Conceptual Railroad
Building
Existing Pavement
Wetlands
Water
H Historic Structure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NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
PATTERSON LN
UNNAMED PONDS
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
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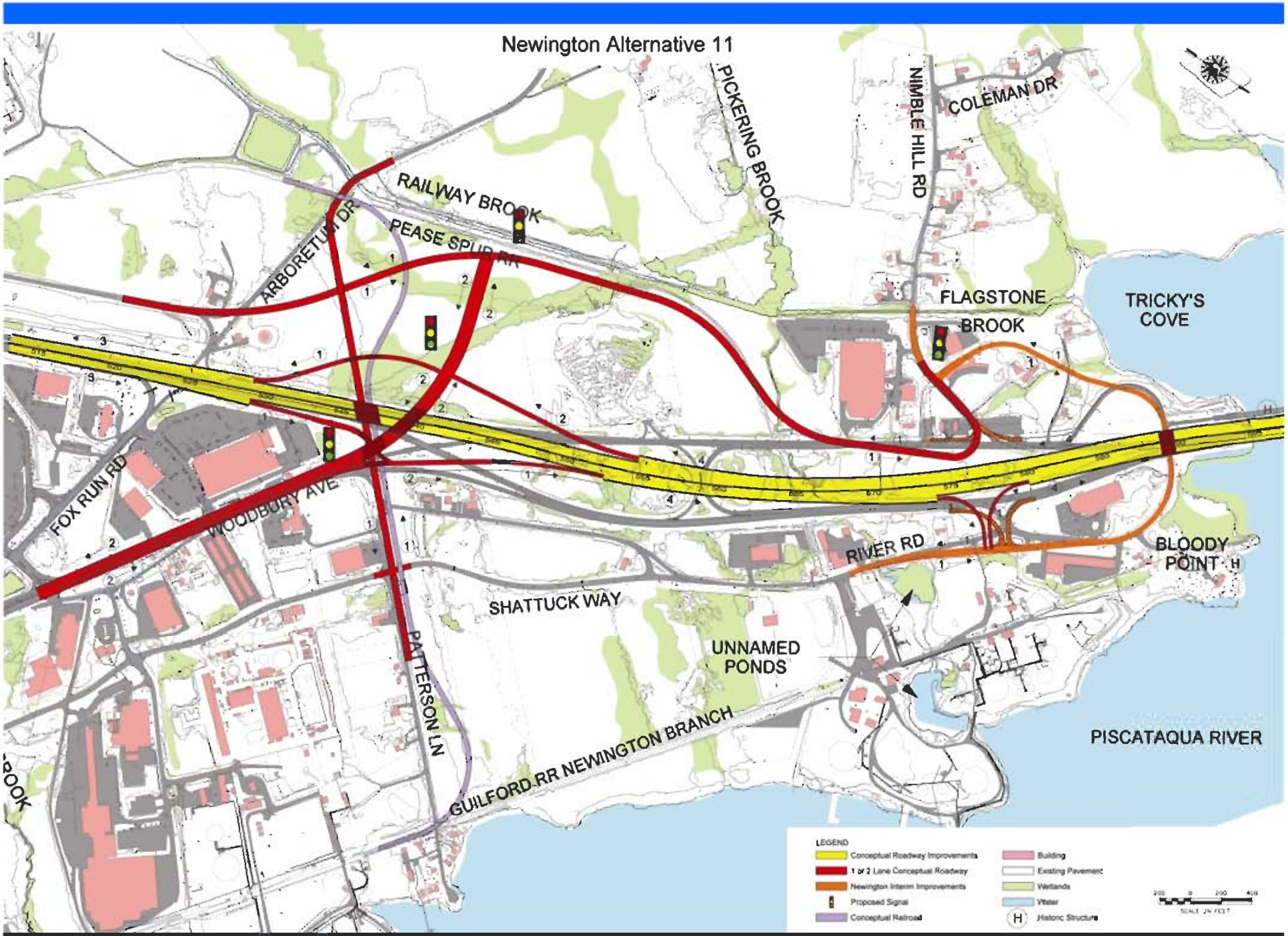
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NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE
BROOK
TRICKY'S
COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY
POINT
SHATTUCK WAY
UNNAMED
PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
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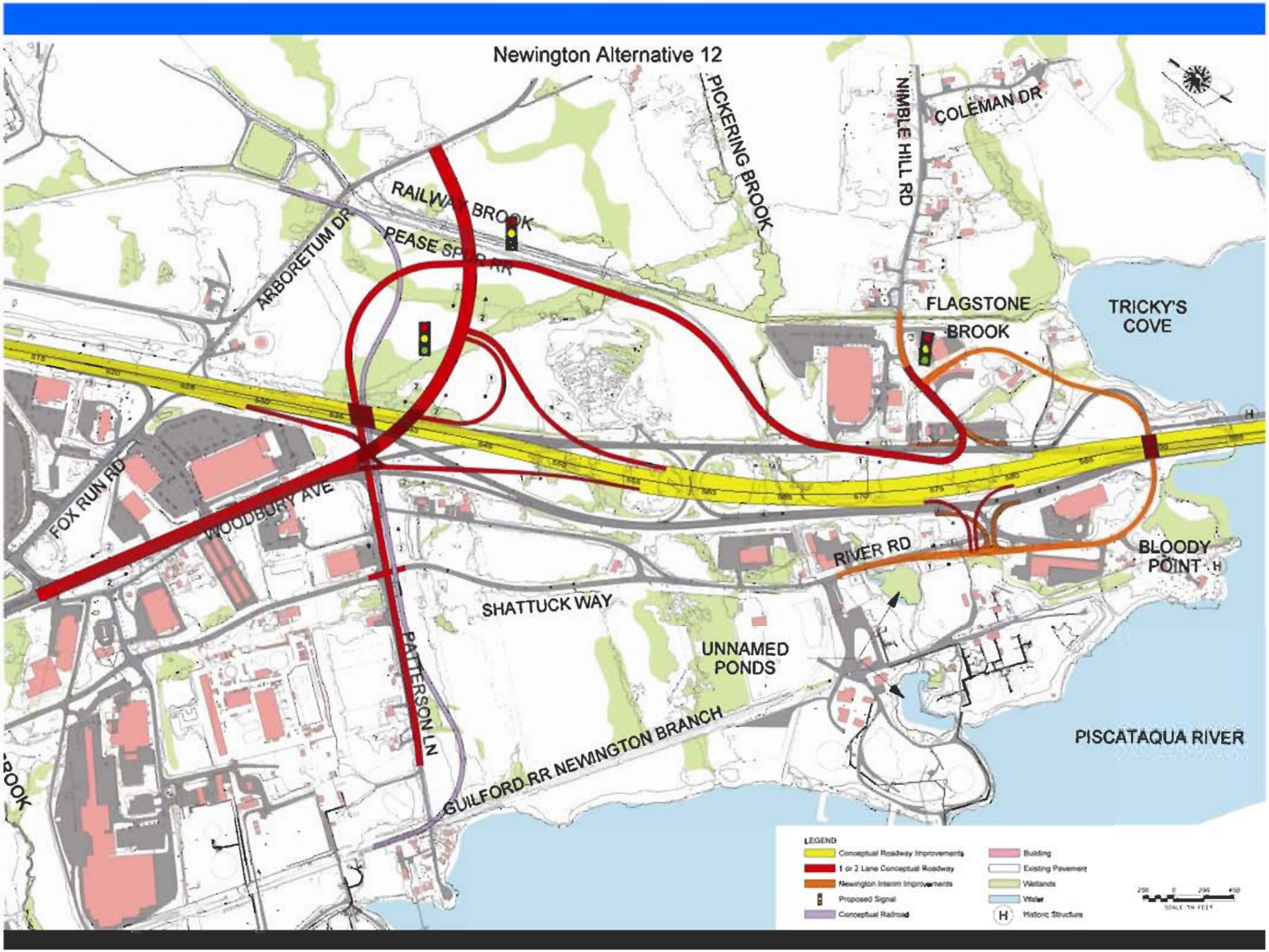
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COLEMAN DR
RAILWAY BROOK
ARBORETUM DR
PEASE SPUR RR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
UNNAMED PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
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H Historic Structure

Newington - Dover , NH 11238
Preliminary Summary of Roadway and Bridge
Impacts / Costs by Option as Compared to No Build
NH Route 16 Spaulding Turnpike Improvements

IMPACTS	UNIT OF MEASUREMENT	ROADWAY SEGMENT		
		DOVER		
		ALT 1	ALT 2	ALT 3
WATER QUALITY & AQUATIC LIFE	Number of Perennial Stream Crossings	0	0	0
	Length of Stream Crossings (Feet)	0	0	0
GROUNDWATER QUALITY	Stratified-Drift Aquifer Under New Roadway Area (Acres)	20.3	11.7	12.7
	Number of Well Head Protection Area (WHPA) crossings	0	0	0
FLOODPLAINS	Floodplain Impacted (Acres)	1.1	1.3	1.3
WETLANDS	Wetland Impacted (Acres)	7.0	4.9	5.1
VERNAL POOLS	Number of Pools Impacted	0	0	0
THREATENED & ENDANGERED SPECIES	Number of Populations Impacted	0	0	0
VISUAL	Impacts to Views from and to the Highway (Qualitative)			
ARCHAEOLOGICAL	Number of Sensitive Areas Affected (Native American/Historic)	7	7	7
HISTORICAL	Number of Eligible/Listed Sites Impacted			
	Number of Structures >50 years old Impacted	9	2	2
RIGHT-OF-WAY DISPLACEMENT	Number of **Residential** Total Property Acquisitions	14	2	2
	Number of **Business** Total Property Acquisitions	2	1	1
COMMUNITY SUPPORT	Qualitative	L	H	H
PUBLIC PARKS & RECREATIONAL LAND	Number of Affected 4(f) Properties, other than Historical	1	1	2
	Area of Affected 4(f) Properties, other than Historical (Acres)	0.9	2.2	2.9
HAZARDOUS MATERIALS	Number of Potentially Contaminated Properties Impacted			
FARMLANDS	Farmlands Impacted (Acres)	0	0	0
WILDLIFE HABITAT	High Value Habitat Impacted (Acres)			
	Degree of Habitat Fragmentation (Qualitative)	No Impact	Slight	Slight
MARINE RESOURCES	Affected Benthic Habitat (Acres)	NA	NA	NA
HYDRODYNAMICS	Change in Tidal Flow Characteristics	NA	NA	NA
AIR	Microscale CO Exceedances (2025)			
NOISE	Number of Receptors Exceeding FHWA Abatement Criteria			
CONSTRUCTABILITY	Qualitative	A	A	A
TRAFFIC OPERATIONS/SYSTEM EFFICIENCY/SAFETY	Qualitative	M	H	H
LOCAL CONNECTIVITY	Qualitative	L	M - H	H
ROADWAY CONSTRUCTION COST	Millions (2004 Dollars) (excluding right of way costs)	21.8	15.2	15.9
BRIDGE CONSTRUCTION COST		4.1	2.6	4.4
TOTAL CONSTRUCTION COST		25.9	17.8	20.3

Newington - Dover , NH 11238
Preliminary Summary of Roadway and Bridge
Impacts / Costs by Option as Compared to No Build
NH Route 16 Spaulding Turnpike Improvements

IMPACTS	UNIT OF MEASUREMENT	ROADWAY SEGMENT					
		NEWINGTON[1]					
		ALT 6 Revised	ALT 7	ALT 9	ALT 10	ALT 11	ALT 12
WATER QUALITY & AQUATIC LIFE	Number of Perennial Stream Crossings	1	5	3	3	3	3
	Length of Stream Crossings (Feet)	330	630	410	360	555	660
GROUNDWATER QUALITY	Stratified-Drift Aquifer Under New Roadway Area (Acres)	4.9	4.5	4.3	4.4	6.2	7.2
	Number of Well Head Protection Area (WHPA) crossings	0	0	0	0	0	0
FLOODPLAINS	Floodplain Impacted (Acres)	0.00	0.02	0.24	0.60	0.01	0.01
WETLANDS	Wetland Impacted (Acres)	10.2	10.5	7.8	10.2	9.4	8.8
VERNAL POOLS	Number of Pools Impacted	0			0	0	0
THREATENED & ENDANGERED SPECIES	Number of Populations Impacted	0	0	0	0	0	0
VISUAL	Impacts to Views from and to the Highway (Qualitative)						
ARCHAEOLOGICAL	Number of Sensitive Areas Affected (Native American/Historic)	3	2	3	3	5	6
HISTORICAL	Number of Eligible/Listed Sites Impacted						
	Number of Structures >50 years old Impacted	1	1	2	2	1	1
RIGHT-OF-WAY DISPLACEMENT	Number of **Residential** Total Property Acquisitions	0	0	1	1	0	0
	Number of **Business** Total Property Acquisitions	1	1	1	1	1	1
COMMUNITY SUPPORT	Qualitative	M	L	M	H	H	H
PUBLIC PARKS & RECREATIONAL LAND	Number of Affected 4(f) Properties, other than Historical	0	0	0	0	0	0
	Area of Affected 4(f) Properties, other than Historical (Acres)	0	0	0	0	0	0
HAZARDOUS MATERIALS	Number of Potentially Contaminated Properties Impacted						
FARMLANDS	Farmlands Impacted (Acres)	3.3	2.1	1.3	2.8	3.5	4.3
WILDLIFE HABITAT	High Value Habitat Impacted (Acres)						
	Degree of Habitat Fragmentation (Qualitative)	Slight	Moderate	Moderate	Moderate	Moderate	Moderate
MARINE RESOURCES	Affected Benthic Habitat (Acres)	NA	NA	NA	NA	NA	NA
HYDRODYNAMICS	Change in Tidal Flow Characteristics	NA	NA	NA	NA	NA	NA
AIR	Microscale CO Exceedances (2025)						
NOISE	Number of Receptors Exceeding FHWA Abatement Criteria						
CONSTRUCTABILITY	Qualitative	D	D	A	A	D	D
TRAFFIC OPERATIONS/SYSTEM EFFICIENCY/SAFETY	Qualitative	M	M	M	H	H	H
LOCAL CONNECTIVITY	Qualitative	L	H	M	M - H	M - H	M - H
ROADWAY CONSTRUCTION COST	Millions (2004 Dollars) (excluding right of way costs)	22.6	29.8	26.0	26.9	25.2	25.4
BRIDGE CONSTRUCTION COST		3.2	8.8	3.0	5.1	8.7	8.2
PEASE SPUR RR COST[4]		2.6	4.1	0.8	0.8	4.0	3.8
TOTAL CONSTRUCTION COST		28.4	42.7	29.8	32.8	37.9	37.4

Newington - Dover , NH 11238
Preliminary Summary of Roadway and Bridge
Impacts / Costs by Option as Compared to No Build
NH Route 16 Spaulding Turnpike Improvements

IMPACTS	UNIT OF MEASUREMENT	BRIDGE SEGMENTS (INCLUDING APPROACHES)					
		WIDEN LITTLE BAY BRIDGE					
		REHABILITATE GENERAL SULLIVAN BRIDGE FOR USE AS MULTI-USE PATHWAY			INCLUDES NEW MULTI-USE PATHWAY (REMOVE GENERAL SULLIVAN)		
		WIDEN EAST[2]	WIDEN WEST	WIDEN BOTH SIDES[3]	WIDEN EAST[2]	WIDEN WEST	WIDEN BOTH SIDES[3]
WATER QUALITY & AQUATIC LIFE	Number of Perennial Stream Crossings	0	0	0	0	0	0
	Length of Stream Crossings (Feet)	0	0	0	0	0	0
GROUNDWATER QUALITY	Stratified-Drift Aquifer Under New Roadway Area (Acres)						
	Number of Well Head Protection Area (WHPA) crossings	0	0	0	0	0	0
FLOODPLAINS	Floodplain Impacted (Acres)						
WETLANDS	Wetland Impacted (Acres)						
VERNAL POOLS	Number of Pools Impacted	0	0	0	0	0	0
THREATENED & ENDANGERED SPECIES	Number of Populations Impacted	1	1	1	1	1	1
VISUAL	Impacts to Views from and to the Highway (Qualitative)						
ARCHAEOLOGICAL	Number of Sensitive Areas Affected (Native American/Historic)						
HISTORICAL	Number of Eligible/Listed Sites Impacted	0	0	0	1	1	1
	Number of Structures >50 years old Impacted						
RIGHT-OF-WAY DISPLACEMENT	Number of **Residential** Total Property Acquisitions	0	0	0	0	0	0
	Number of **Business** Total Property Acquisitions	0	0	0	0	0	0
COMMUNITY SUPPORT	Qualitative	L	H	L	L	H	L
PUBLIC PARKS & RECREATIONAL LAND	Number of Affected 4(f) Properties, other than Historical	0	0	0	0	0	0
	Area of Affected 4(f) Properties, other than Historical (Acres)	0	0	0	0	0	0
HAZARDOUS MATERIALS	Number of Potentially Contaminated Properties Impacted						
FARMLANDS	Farmlands Impacted (Acres)						
WILDLIFE HABITAT	High Value Habitat Impacted (Acres)						
	Degree of Habitat Fragmentation (Qualitative)	NA	NA	NA	NA	NA	NA
MARINE RESOURCES	Affected Benthic Habitat (Acres)						
HYDRODYNAMICS	Change in Tidal Flow Characteristics						
AIR	Microscale CO Exceedances (2025)						
NOISE	Number of Receptors Exceeding FHWA Abatement Criteria						
CONSTRUCTABILITY	Qualitative	A	A	D	A	A	D
TRAFFIC OPERATIONS/SYSTEM EFFICIENCY/SAFETY	Qualitative	H	H	H	H	H	H
ROADWAY CONSTRUCTION COST	Millions (2004 Dollars) (excluding right of way costs)	12.0	12.0	12.0	12.0	12.0	12.0
BRIDGE CONSTRUCTION COST		46.0	46.0	46.0	52.0	52.0	52.0
REMOVE GENERAL SULLIVAN BRIDGE					5.0	5.0	5.0
REHABILITATE GENERAL SULLIVAN BRIDGE		22.0	22.0	22.0			
TOTAL CONSTRUCTION COST		80.0	80.0	80.0	69.0	69.0	69.0

Newington - Dover , NH 11238
Preliminary Summary of Roadway and Bridge
Impacts / Costs by Option as Compared to No Build
NH Route 16 Spaulding Turnpike Improvements

IMPACTS	UNIT OF MEASUREMENT	BRIDGE SEGMENTS (INCLUDING APPROACHES)							
		REPLACE LITTLE BAY BRIDGE							
		REPLACE ONLINE			REPLACE ON-LINE			REPLACE OFF-LINE (WEST)	
		REHABILITATE GENERAL SULLIVAN BRIDGE FOR USE AS MULTI-USE PATHWAY			(REMOVE GEN. SULLIVAN w/ NEW MULTI-USE PATHWAY)				
		WIDEN EAST[2]	WIDEN WEST	WIDEN BOTH SIDES[3]	WIDEN EAST[2]	WIDEN WEST	WIDEN BOTH SIDES[3]	ARCH BRIDGE	CABLE-STAYED BRIDGE
WATER QUALITY & AQUATIC LIFE	Number of Perennial Stream Crossings	0	0	0	0	0	0	0	0
	Length of Stream Crossings (Feet)	0	0	0	0	0	0	0	0
GROUNDWATER QUALITY	Stratified-Drift Aquifer Under New Roadway Area (Acres)								
	Number of Well Head Protection Area (WHPA) crossings	0	0	0	0	0	0	0	0
FLOODPLAINS	Floodplain Impacted (Acres)								
WETLANDS	Welland Impacted (Acres)								
VERNAL POOLS	Number of Pools Impacted	0	0	0	0	0	0	0	0
THREATENED & ENDANGERED SPECIES	Number of Populations Impacted	1	1	1	1	1	1	1	1
VISUAL	Impacts to Views from and to the Highway (Qualitative)								
ARCHAEOLOGICAL	Number of Sensitive Areas Affected (Native American/Historic)								
HISTORICAL	Number of Eligible/Listed Sites Impacted	0	0	0	1	1	1	1	1
	Number of Structures >50 years old Impacted								
RIGHT-OF-WAY DISPLACEMENT	Number of **Residential** Total Property Acquisitions	0	0	0	0	0	0	7	7
	Number of **Business** Total Property Acquisitions	0	0	0	0	0	0	0	0
COMMUNITY SUPPORT	Qualitative	L	H	L	L	H	L	M	M
PUBLIC PARKS & RECREATIONAL LAND	Number of Affected 4(f) Properties, other than Historical	0	0	0	0	0	0	0	0
	Area of Affected 4(f) Properties, other than Historical (Acres)	0	0	0	0	0	0	0	0
HAZARDOUS MATERIALS	Number of Potentially Contaminated Properties Impacted								
FARMLANDS	Farmlands Impacted (Acres)								
WILDLIFE HABITAT	High Value Habitat Impacted (Acres)								
	Degree of Habitat Fragmentation (Qualitative)	NA	NA	NA	NA	NA	NA	NA	NA
MARINE RESOURCES	Affected Benthic Habitat (Acres)								
HYDRODYNAMICS	Change in Tidal Flow Characteristics								
AIR	Microscale CO Exceedances (2025)								
NOISE	Number of Receptors Exceeding FHWA Abatement Criteria								
CONSTRUCTABILITY	Qualitative	A	A	D	A	A	D	A	A
TRAFFIC OPERATIONS/SYSTEM EFFICIENCY/SAFETY	Qualitative	H	H	H	H	H	H	H	H
LOCAL CONNECTIVITY	Qualitative								
ROADWAY CONSTRUCTION COST	Millions (2004 Dollars) (excluding right of way costs)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
BRIDGE CONSTRUCTION COST		60.0	60.0	60.0	67.0	67.0	67.0	87.0	90.0
REMOVE GENERAL SULLIVAN BRIDGE					5.0	5.0	5.0	5.0	5.0
REHABILITATE GENERAL SULLIVAN BRIDGE		22.0	22.0	22.0					
TOTAL CONSTRUCTION COST		94.0	94.0	94.0	84.0	84.0	84.0	104.0	107.0

Newington - Dover , NH 11238
Preliminary Summary of Roadway and Bridge
Impacts / Costs by Option as Compared to No Build
NH Route 16 Spaulding Turnpike Improvements

PROJECT COST EXAMPLES

	LOWEST COST ALTERNATIVE		HIGHEST COST ALTERNATIVE	
NEWINGTON SEGMENT	ALT 10	$32.8	ALT 7	$42.7
BRIDGE SEGMENT	WIDEN & REMOVE GEN SUL.	$69.0	CABLE-STAYED & REMOVE	$107.0
DOVER SEGMENT	ALT 2	$17.8	ALT 1	$25.9
TOTAL		**$119.6**		**$175.6**

Reasonable Range of Alternatives to Carry Forward

- No-Build
- Transportation System Management (TSM)
- Transportation Demand Management (TDM)
- Bridge
- Roadway
- Combination of Above

Dover TSM 1

BOSTON HARBOR RD
SPUR RD
SPAULDING TURNPIKE
400 '
Lengthen Exit 6W Deceleration Lane
By 400 Feet By Shimming and Re-Striping
Lane and Shoulder.
DOVER POINT RD
LEGEND

Dover TSM 2

Emergency Access Gate SB On-Ramp
From Boston Harbor Road
Maintain Two SB Lanes on Mainline.
Create Standard One Lane On-Ramp
and Merge
BOSTON HARBOR RD
Remove Excess Pavement (Typ.)
SPAULDING TURNPIKE
POMEROY
COVE
LEGEND

Interim Safety Plan

Public Hearing

Newington Town Hall
205 Nimble Hill Road
Newington, New Hampshire
Wednesday, March 5, 2003
7:00 P.M.

Attention

THE SPECIAL COMMITTEE APPOINTED BY THE GOVERNOR AND EXECUTIVE COUNCIL TO DETERMINE THE NECESSITY OF THIS PROJECT CONSISTS OF:
RUTH L. GRIFFIN, EXECUTIVE COUNCILOR, CHAIRPERSON
RAYMOND J. WIECZOREK, EXECUTIVE COUNCILOR
PETER J. SPAULDING, EXECUTIVE COUNCILOR

WRITTEN STATEMENTS AND OTHER EXHIBITS MAY BE SUBMITTED TO THE CHAIRMAN OF THE SPECIAL COMMITTEE c/o:
DAVID J. BRILLHART, DIRECTOR OF PROJECT DEVELOPMENT
THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
P.O. BOX 483 CONCORD, N.H. 03302-0483
UP TO 10 DAYS AFTER THE DATE OF THE HEARING FOR INCLUSION IN THE OFFICIAL RECORD

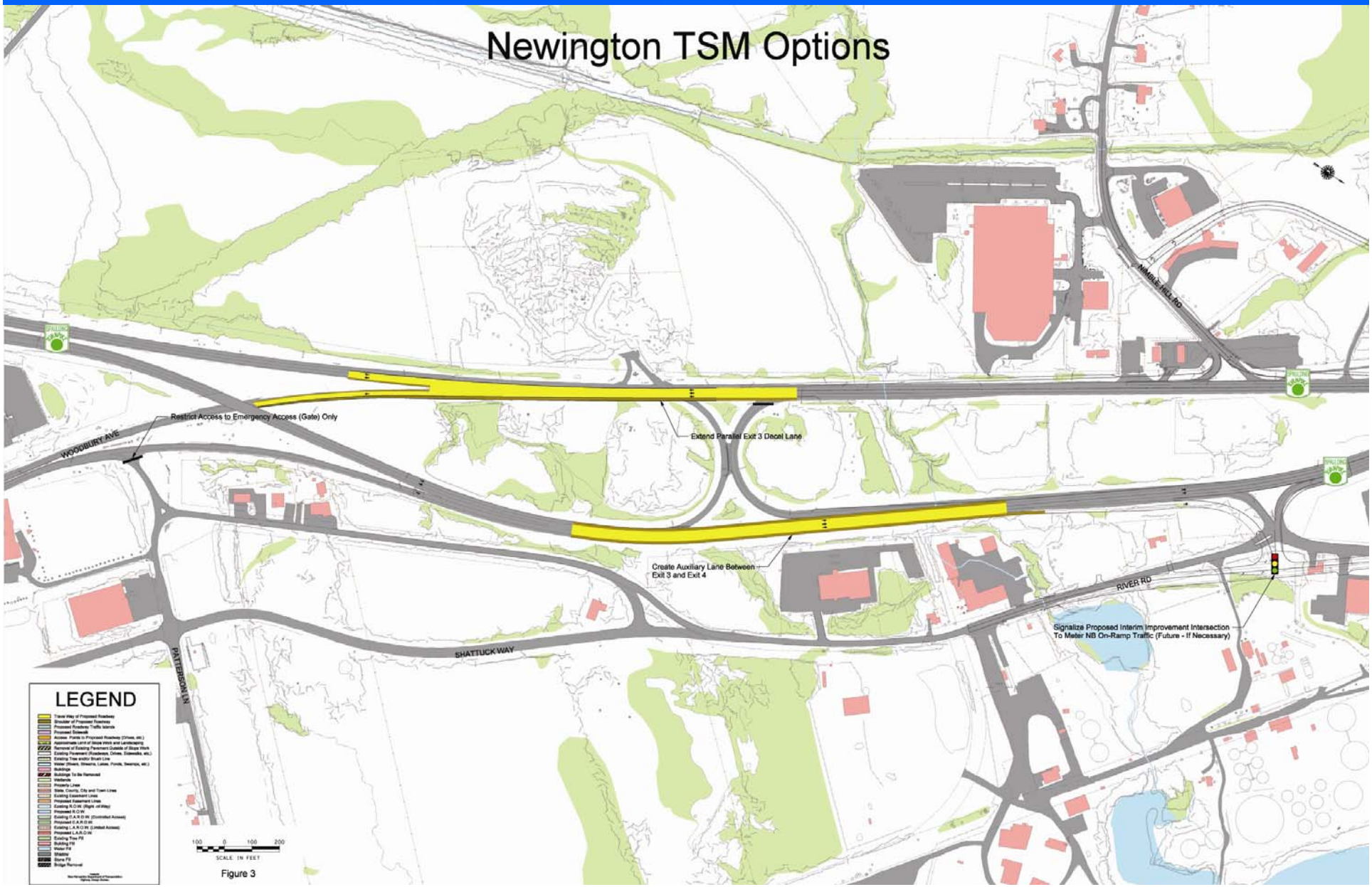
-100 0 200 400
SCALE: 1" = 400'

Proposed Work
Existing Pavement
Wetlands
Resurfacing / Driveway Improvements
Existing Buildings
Water
Buildings to be Removed
Pavement Removal

Project Information Map
Proposed Interchange Improvements
Exit 4 / River Road / Nimble Hill Road
Newington, New Hampshire
A000(115), 11238-C

New Hampshire DOT
Department of Transportation

Newington TSM Options


Newington TSM Options
Restrict Access to Emergency Access (Gate) Only
Extend Parallel Exit 3 Decel Lane
Create Auxiliary Lane Between Exit 3 and Exit 4
Signalize Proposed Interim Improvement Intersection To Meter NB On-Ramp Traffic (Future - If Necessary)
WOODBURY AVE
SHATTUCK WAY
PATTERSON LN
RIVER RD
NIMBLE HILL RD
LEGEND
SCALE IN FEET
Figure 3

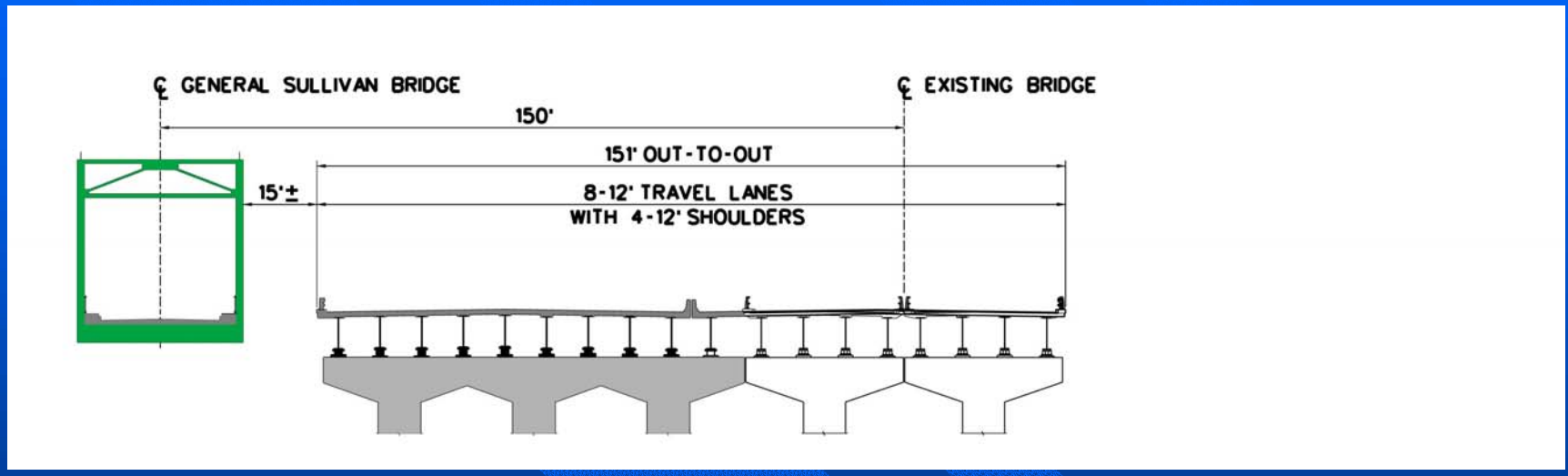
TDM Alternatives

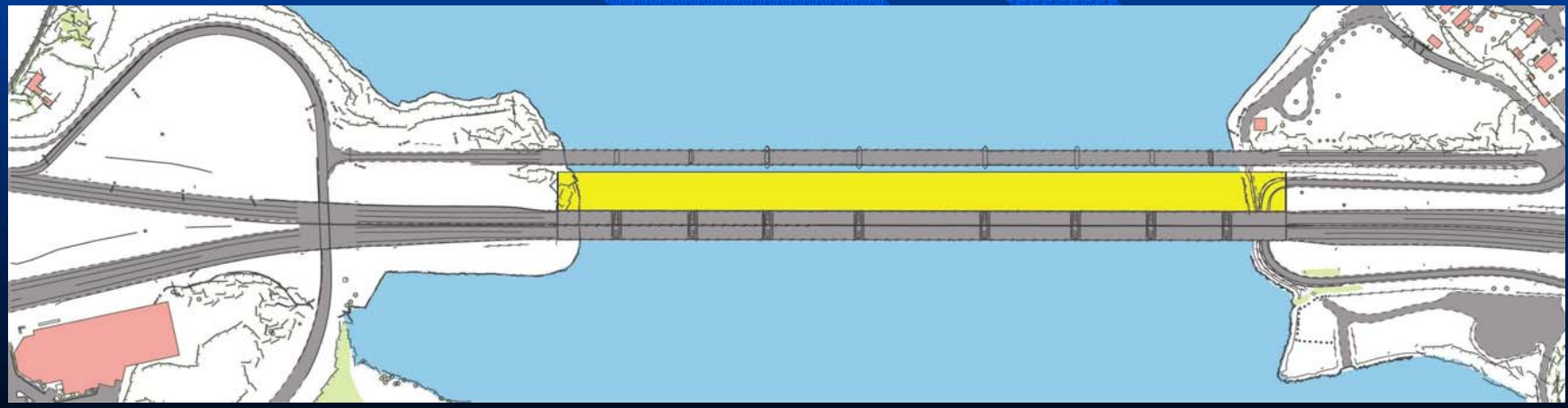
- Expand Downeaster Service (Without double tracking Main Line West)
- Restoration of Pease Spur
- Expand Intercity Bus Service (Rochester-Boston)
- Enhance Express Bus Service (Rochester-Portsmouth)
- Enhance Local Bus Service
- Promote Employer Based Measures

Bridge Alternatives

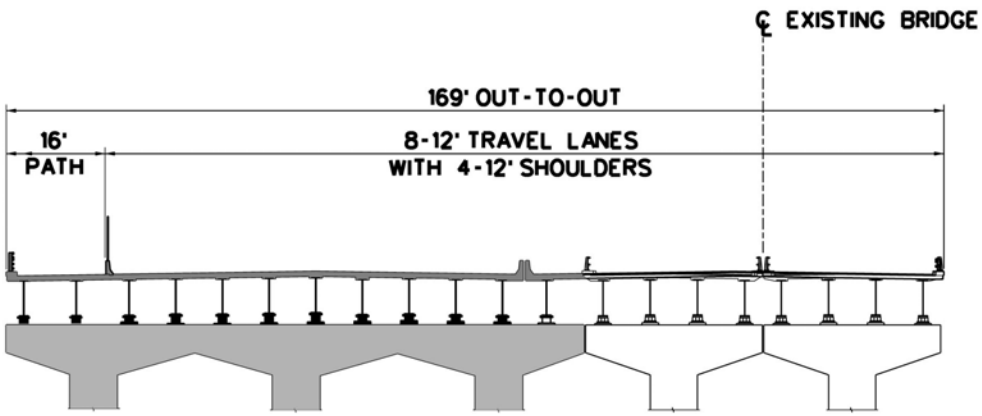
- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Rehabilitation
- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Removed
- Replace Little Bay Bridges with General Sullivan Bridge Removed

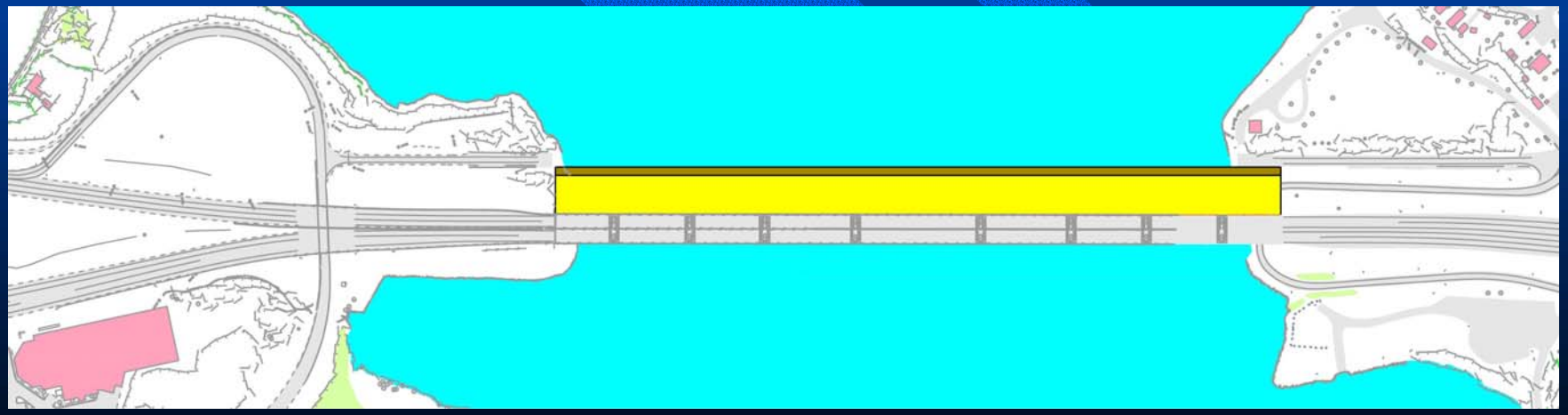
Conceptual Cross-Section
Widen to West Side
Rehabilitate General Sullivan Bridge



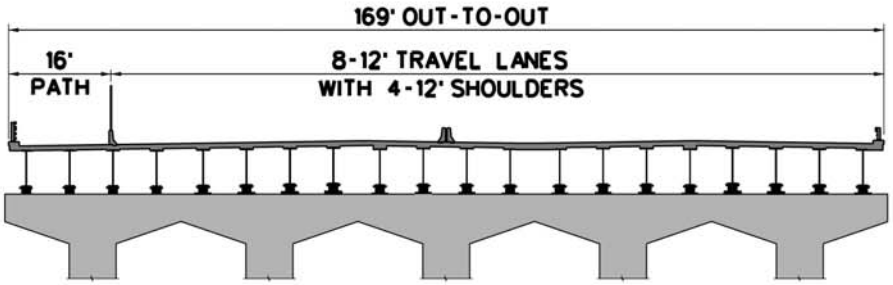


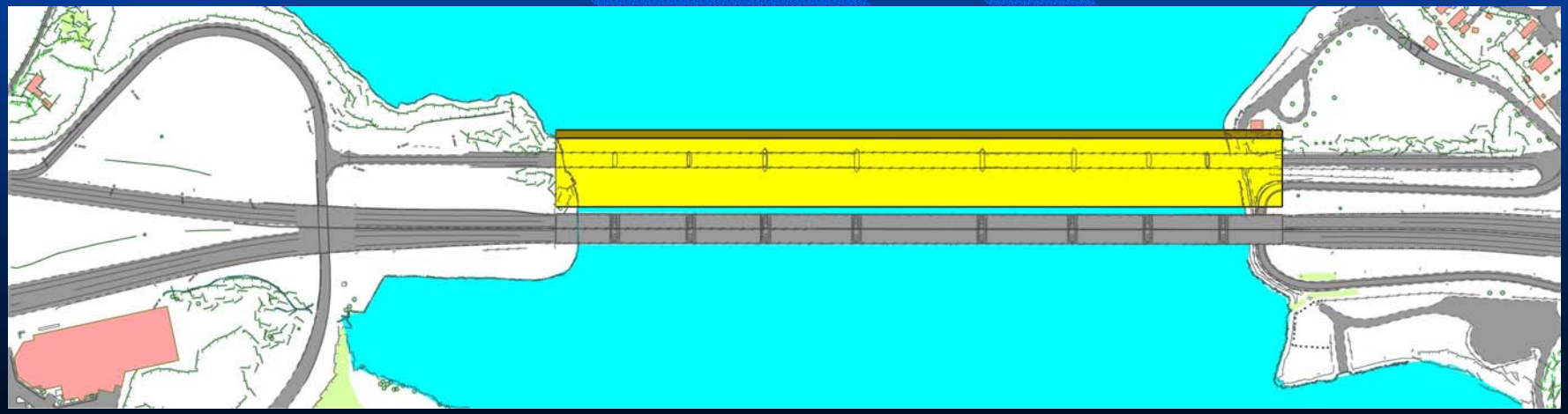
Conceptual Cross-Section
Widen to West Side with Multi-Use Path
Remove General Sullivan Bridge





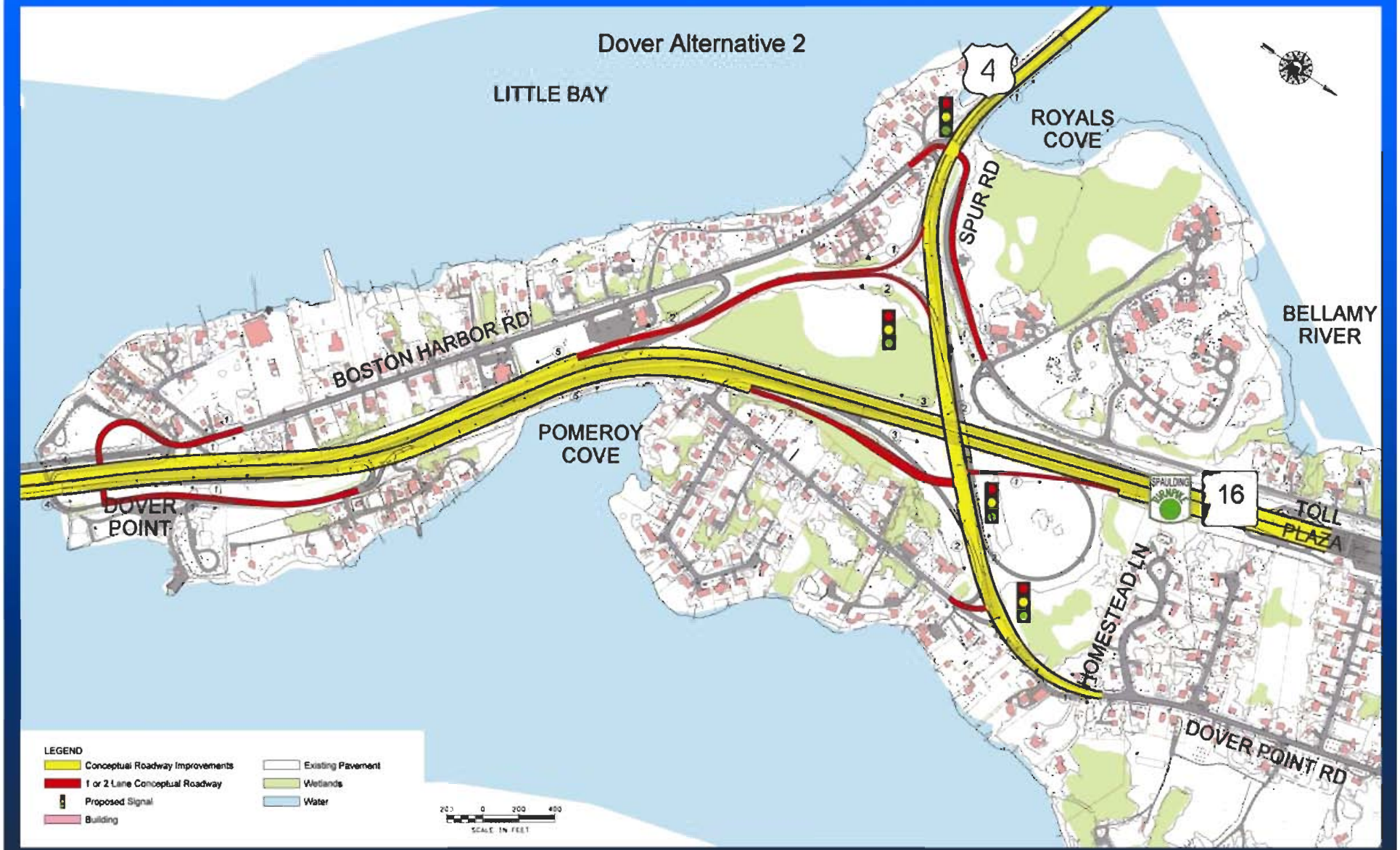
Conceptual Cross-Section
New Bridge with Multi-Use Path
Replace Little Bay Bridges and General Sullivan Bridge

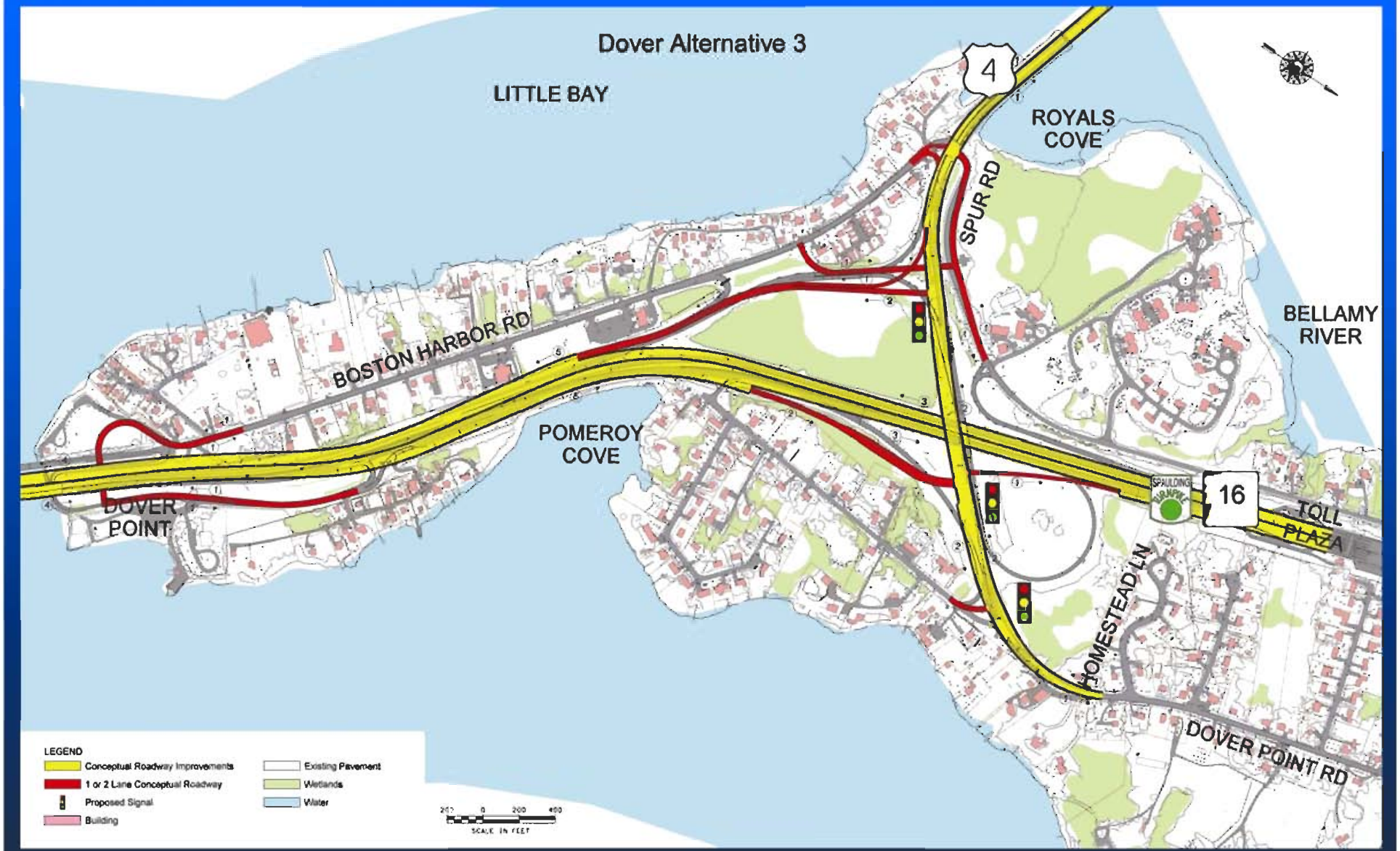


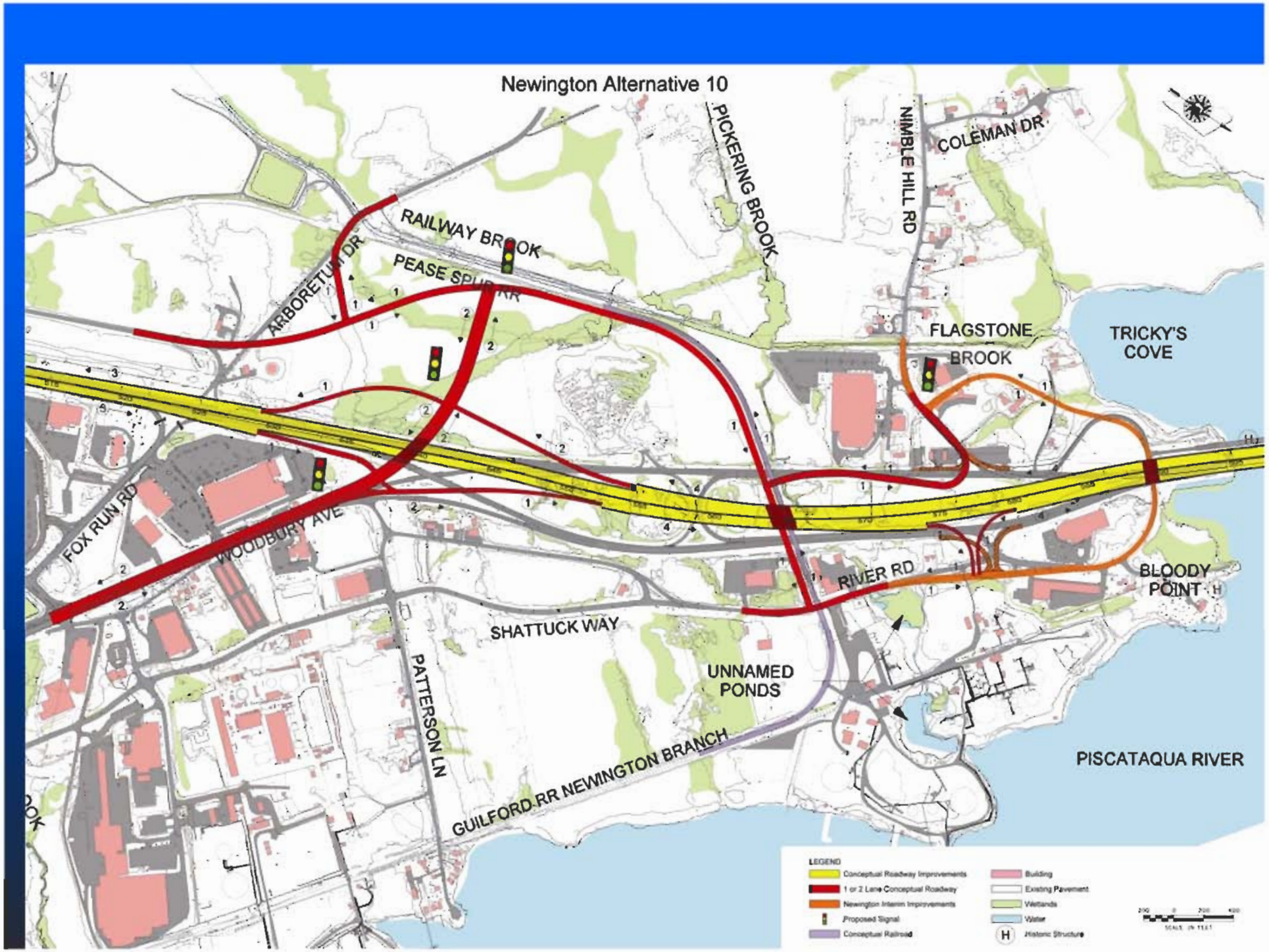


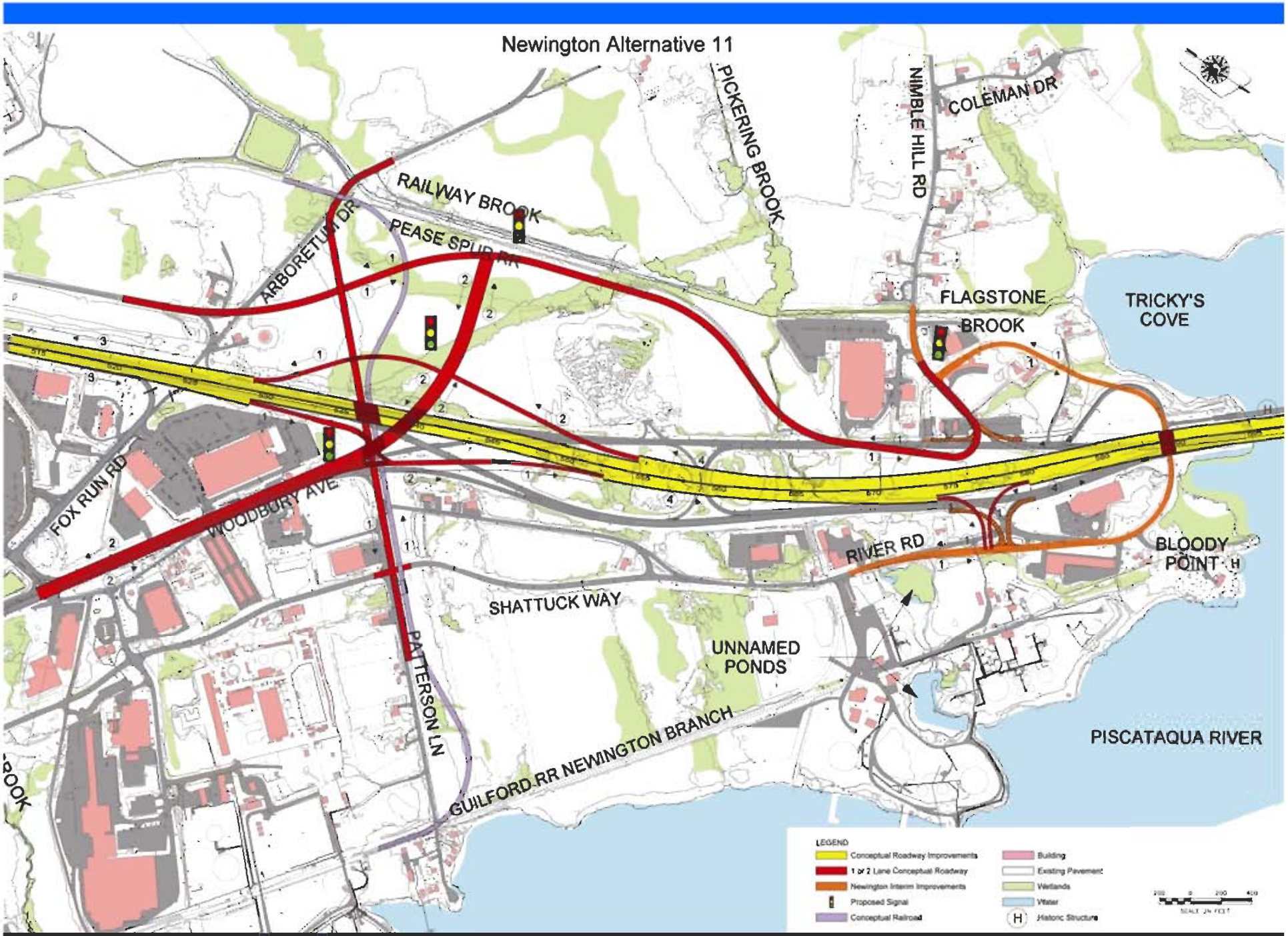
Roadway Alternatives

- Alternative 2 (Dover)
- Alternative 3 (Dover)
- Alternative 10 (Newington)
- Alternative 11 (Newington)
- Alternative 12 (Newington)


Dover Alternative 2
LITTLE BAY
ROYALS COVE
SPUR RD
BELLAMY RIVER
BOSTON HARBOR RD
POMEROY COVE
DOVER POINT
4
16
TOLL PLAZA
HOMESTEAD LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Proposed Signal
Building
Existing Pavement
Wetlands
Water
200 0 200 400
SCALE IN FEET


Dover Alternative 3
LITTLE BAY
ROYALS COVE
SPUR RD
BELLAMY RIVER
BOSTON HARBOR RD
POMEROY COVE
DOVER POINT
4
16
TOLL PLAZA
HOMESTEAD LN
DOVER POINT RD
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Proposed Signal
Building
Existing Pavement
Wetlands
Water
SCALE IN FEET


Newington Alternative 10
PICKERING BROOK
NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
PATTERSON LN
UNNAMED PONDS
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Newington Interim Improvements
Proposed Signal
Conceptual Railroad
Building
Existing Pavement
Wetlands
Water
Historic Structure


Newington Alternative 11
PICKERING BROOK
NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
PEASE SPUR RR
ARBORETUM DR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
UNNAMED PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
LEGEND
Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
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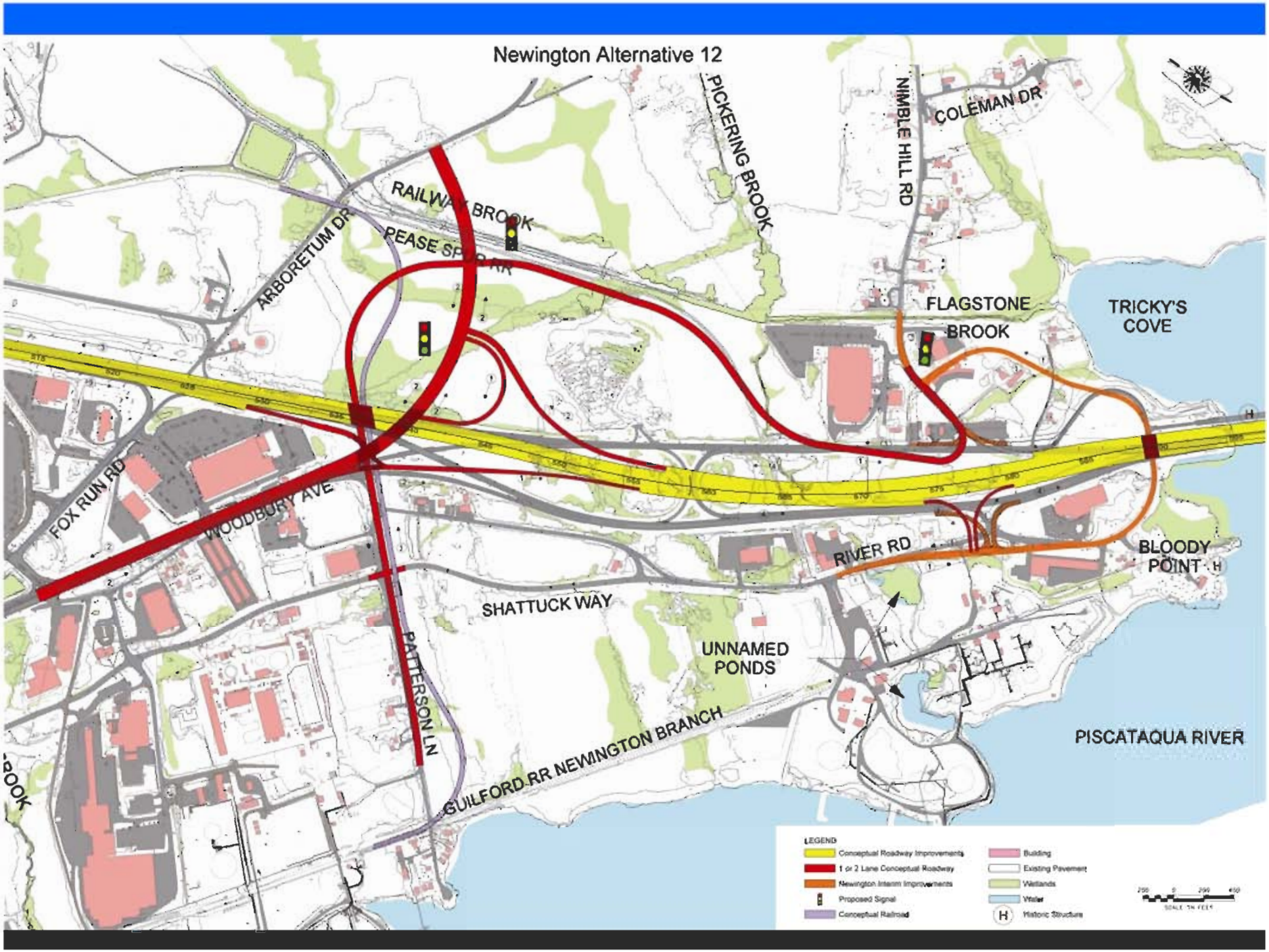
Newington Alternative 12
PICKERING BROOK
NIMBLE HILL RD
COLEMAN DR
RAILWAY BROOK
ARBORETUM DR
PEASE SPUR RR
FLAGSTONE BROOK
TRICKY'S COVE
FOX RUN RD
WOODBURY AVE
RIVER RD
BLOODY POINT
SHATTUCK WAY
UNNAMED PONDS
PATTERSON LN
GUILFORD RR NEWINGTON BRANCH
PISCATAQUA RIVER
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Conceptual Roadway Improvements
1 or 2 Lane Conceptual Roadway
Newington Interim Improvements
Proposed Signal
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Building
Existing Pavement
Wetlands
Water
H Historic Structure

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THANK YOU
FOR
YOUR INTEREST

Open Discussion